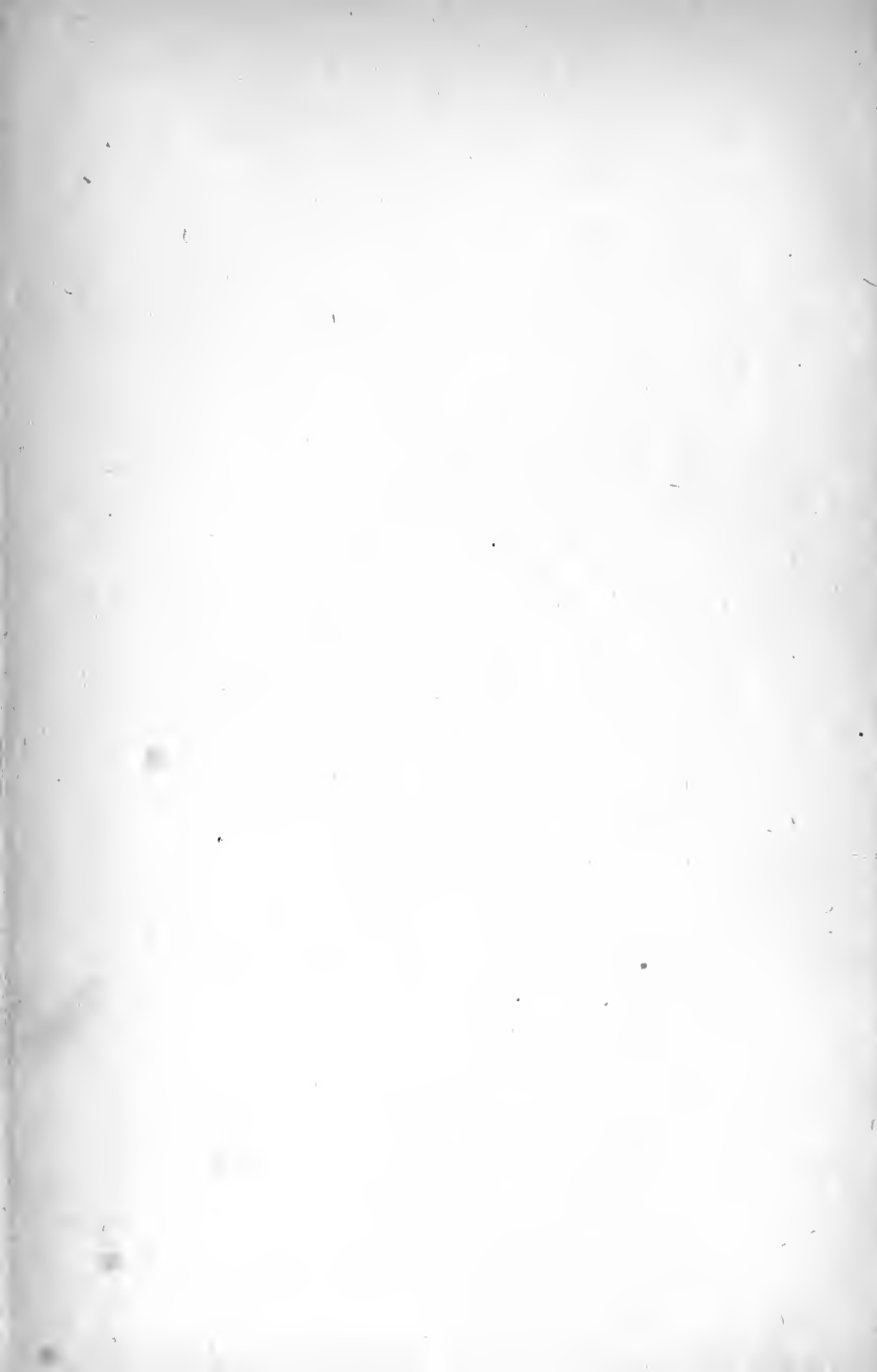
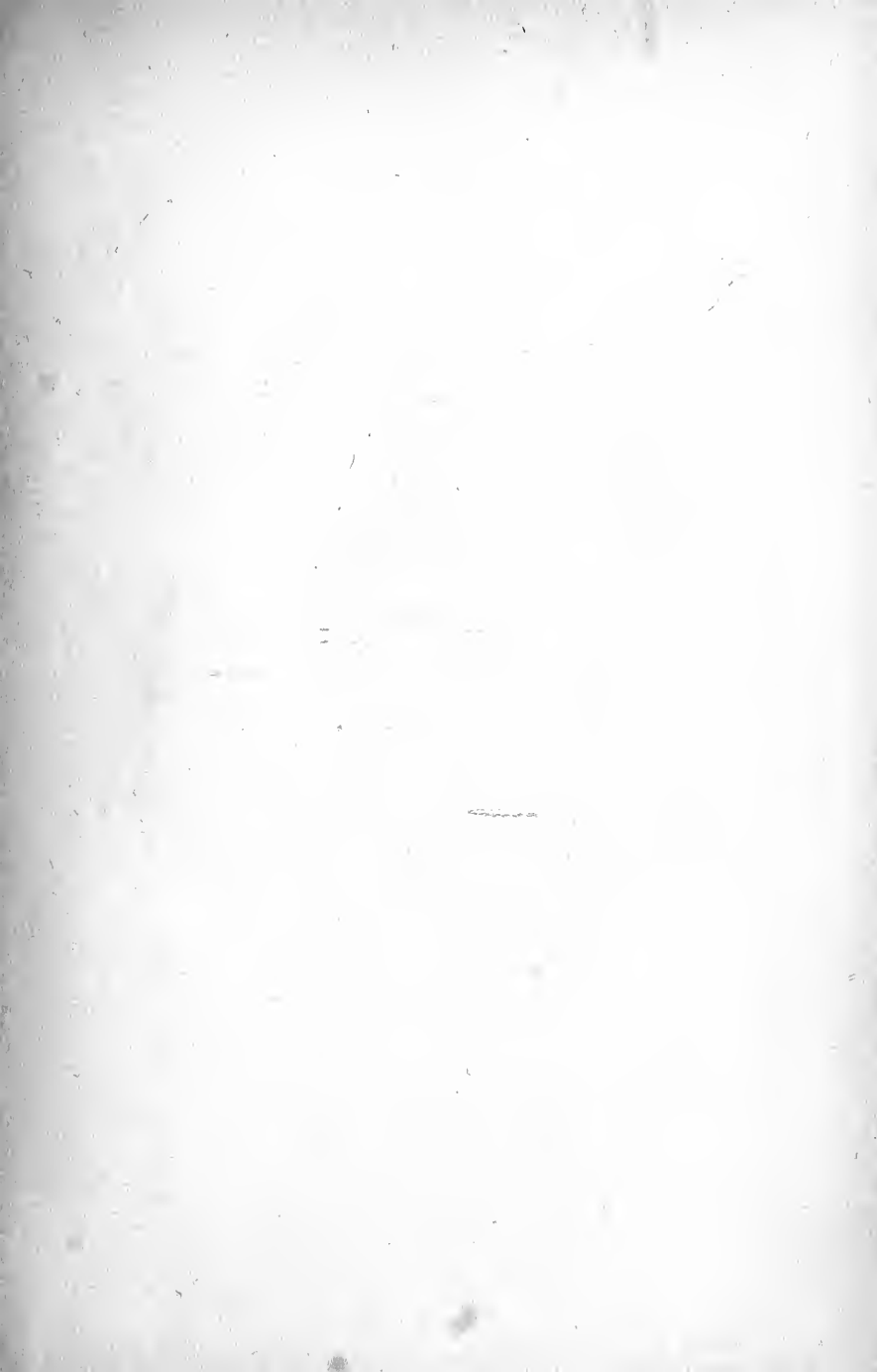



**A CONTRIBUTION
TO
PELVIC AND ABDOMINAL SURGERY
BY
R. STANSBURY SUTTON.**

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PERSONAL EXPERIENCES
IN
PELVIC AND ABDOMINAL SURGERY

A CONTRIBUTION

BY

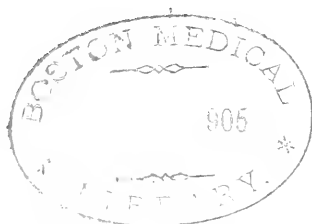
R. STANSBURY SUTTON, A. M., M. D., LL. D.

Ex-President of the American Academy of Medicine, of the Mississippi Valley Medical Association, and of the Pittsburg Obstetrical and Gynecological Society; Ex-Vice President of the American Gynecological Society; Associate Fellow of the Philadelphia Obstetrical Society; Non-Resident Member of the Washington Academy of Sciences; Ex-President of the Section of Obstetrics and Gynecology of the American Medical Association; Fellow of the British Gynecological Society; Member of the British Medical Association; Member of the International Gynecological Society, Etc., Etc.

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L. Marion Sims M.D.

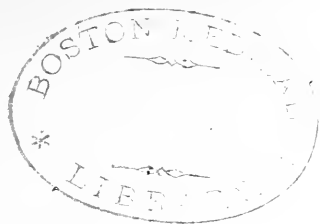


TO THE MEMORY
OF
J. MARION SIMS, M. D.,
WHO, AT OUR LAST PARTING IN LONDON, SAID TO ME,
"SUTTON, DON'T FORGET YOUR GOD-FATHER"
THIS CONTRIBUTION IS
AFFECTIONATELY DEDICATED.

PREFACE.

I have written only concerning those things of which I have acquired some practical knowledge.

Clinical experience is better than theory.



INTRODUCTORY.

My first experience in abdominal surgery occurred in my first ovariectomy, done on the twenty-fifth of June, 1875, at the West Penn Hospital, in the city of Pittsburg, Pa. Prior to this date I had seen ovariectomy done by the late Washington L. Atlee, on two occasions. Once in the Fall of 1862, and again at a later period. Both of the patients in whom I saw him do the operation died.

My first case was my own patient, the sister of a young man, whom some years before I had attended successfully in an ordinary illness. She was a factory girl and in great distress, because of unkind accusations by her fellow workers. She came under my observation several months prior to the operation, and following the early advice of Sir Spencer Wells with reference to the best time for operating, advice which has long since been considered worthless, I carried the patient along until she could not walk a mile, and was practically disabled. The operation was done in that period when Peaslee was pleading for the abolishment of extra-peritoneal treatment of the pedicle, by means of Jonathan Hutchinson's clamp, a modification of which I had learned the use of from Atlee.

The preliminary preparation of the patient was limited to the administration, for a short time prior to the operation, of a small quantity of citrate of lithia and bi-carbonate of soda, three times a day. To a free purgation and a bath prior to the operation. No modern antiseptic or aseptic precautions were undertaken.

At this my first ovariectomy, nearly all the members of the Staff of the West Penn Hospital were present, and the late Dr. J. B. Murdoch acted as my assistant.

OPERATION, JUNE 25, 1875. Median incision. A long steel bougie was introduced through the abdominal wound, and swept over the surface of the cyst, which reached far above the umbilicus, to determine the presence or not, of adhesions. None being found, Fitch's dome trocar was thrust into the cyst and a very large quantity of fluid was evacuated. The collapsed cyst was now drawn through the abdominal wound, and Atlee's clamp was applied to the pedicle. The pedicle was severed with the scissors above the clamp. The wound was closed with interrupted silver wire sutures down to the pedicle, which occupied the lower angle of the wound, supported by the clamp. Small compresses of linen were placed between the arms of the clamp and the surface of the abdomen.

Result.—The clamp sloughed off about the close of the second week, or beginning of the third. A stitch hole abscess also occurred, but by the end of the month the patient had made a good recovery.

She was then quite a young girl, and subsequently married, and reared a family of children, who have turned out remarkably well. While she herself is still living, and has charge of four hundred female hands in one of the mammoth manufactories in this city.

My second case was done in August, 1876, in a small two-story, frame house, located on Carson Street, Pittsburg, Pa. The patient was very large, she had been tapped several times by Dr. A. G. Walter, who had recently died. She applied to me for relief, expecting to be tapped again, but I declined to tap her, and proposed to remove the tumor, to which proposition she acceded. I was assisted in the operation by Dr. George Rahauser, and I think that Dr. LeMoyne was also present and assisted.

OPERATION, AUGUST, 1876. Free median incision, introduction of the hand into the cavity and the breaking up therewith, some parietal adhesions, and separating the adherent omentum. Some ligatures were applied to injured omental vessels. The cyst was reduced with the trocar and delivered. The pedicle was tied and cut off with the scissors and dropped. What was known as the "toilet of the peritoneum" was completed, and the wound was closed with interrupted silver wire sutures. This patient recovered, subsequently married and reared a family of six or eight children, and was still living at a recent date.

My third case was referred to me by Dr. Wm. J. Langfitt, a resident of Allegheny City, in the Spring of 1877. She was the unmarried daughter of a gardener, living on a small farm near Shousetown, in Beaver County, Pa.

I visited her for the first time in consultation with Dr. Langfitt. She had a large tumor, and had been tapped frequently. Out of one of the trocar punctures, still unhealed, but made many months before, ovarian fluid was oozing, and the abdominal wall, in the neighborhood of the trocar puncture, was in very bad condition, the skin having the appearance of being thickened and macerated.

OPERATION, MAY, 1877. The patient's bowels having been cleared out, and her old German parents being sure the sign of the Zodiac was all right, the operation was proceeded with.

Dr. W. J. Langfitt, Dr. Elias Porter, of Shousetown, Dr. W. S. Huselton, Dr. James Ray, and others whom I do not recall, were present. The patient was placed on a table in the kitchen and anaesthetized. A free median incision, followed by the introduction of the hand, and breaking up of almost universal adhesions, omental, parietal and intestinal. The ligation of many bleeding points followed in the course of the operation. The multilocular cyst was reduced with the trocar and drawn out and the pedicle was divided with the scissors.

I have rarely in the twenty-four years which have about elapsed, encountered, or seen anybody else encounter a worse case. She was left under the care of Dr. Porter, who had never before seen a case of ovariectomy. Her recovery was uneventful, beyond a very slight superficial suppuration in the wound. She subsequently married, reared a family, and is still living.

Following these cases, I had two fatal cases on the South Side of the city. One was malignant, and the operation was incomplete. The second was a very large multilocular, ovarian cyst, which had been tapped many times, and in which the adhesions were very extensive. The trocar became choked with hair. An enormous quantity of fluid was evacuated, and the cyst contained bone, teeth and skin, in addition to hair, in other words, it was a dermoid. The operation was done under poor conditions, without aseptic or antiseptic precautions, as the preceding cases had been done, and I think in the month of January. The patient died a few days later, probably from shock. Her family physician declined to be present, saying by note that he was morally opposed to the operation.

I now began to realize that my knowledge of abdominal surgery was limited, and after having done two more cases, by abdominal section, and a posterior colpotomy, in which I removed a pediculated fibroid tumor of the uterus, about as large as a goose egg, through the vagina, in which operation I was assisted by the late Dr. A. M. Pollock, and some of the staff of the Passavant Hospital, I became discouraged with the subject of abdominal surgery.

From the Spring of 1872 to that of 1881, I had done a good deal of minor gynecology, and delivered two courses of lectures upon the subject in the Rush Medical College of Chicago, in the Spring of 1880 and 1881. During this period I was engrossed in a large family practice. During three years

previous to 1881, I conducted the first gynecological clinic in the city, at the Passavant Hospital.

In the latter year, toward the close of the Summer, having been in general practice for fifteen years, I went abroad with a view of visiting European clinics, and with the hope of learning something concerning surgery done within the peritoneal cavity.

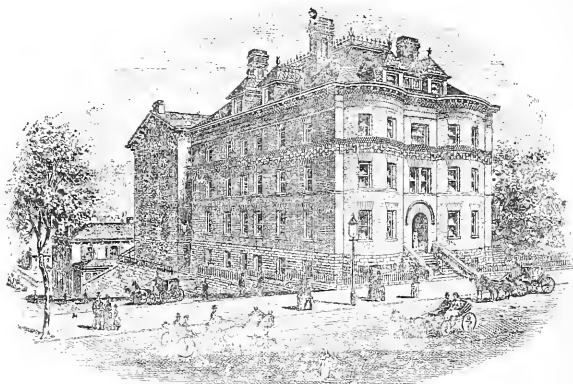
Out of the following twenty-one months, during which I was absent I spent eighteen months with the leading abdominal surgeons of England, Scotland, and the Continent of Europe. Among these were Thomas Keith of Edinburgh, Mr. Lawson Tait of Birmingham, Wells, Bantock, and Thornton, of London, Schroeder and Martin, of Berlin, Nussbaum of Munich, Kœberle of Strasbourg, Pean of Paris, and Prof. Von Bilioth of Vienna. During the four months I spent in Vienna, I enjoyed the advantages of the private surgical courses given by Mikulicz, Woeffler, and Zuckerkandl, and through the courtesy of Prof. Von Bilioth, witnessed all of his abdominal operations.

Of the old operators mentioned, so far as I know at present, Dr. Bantock of London, and Mr. Thornton, are the only ones living. They are both remarkably fine operators. An ovariectomy done by Thornton, or a supra-vaginal hysterectomy done by Bantock, were veritable lessons in surgery. But I believe in those days, Prof. Von Bilioth was, with the exception of his old master, Prof. Von Langenbeck, the best all around surgeon on the other side of the Atlantic. Before going to Europe to study in 1881, I was elected Professor of Operative Surgery in the College of Physicians and Surgeons of Baltimore.

After my return to Pittsburg, in 1883, I was tendered the position of assistant surgeon to the Woman's Hospital of New York, and the Chair of Gynecology in another city. But for reasons which were more sentimental than practical, I remained in Pittsburg, to become a pioneer in the branch of surgery which had, for several years, engaged my attention and study.

During the Summer of 1883, I did a dozen cases of laparotomy, under such conditions as we then had at our command, and with the entire absence of trained nurses, with varying success, but on the whole, unsatisfactory.

In the Fall of 1883, I took a small dwelling house, and converted it into a hospital, and placed a trained nurse at the head of a small corps of untrained nurses. This institution grew into what was subsequently known as "Terrace Bank Hospital for Women," and which continued in operation under my own management, until December 1, 1899, a period of a



little more than sixteen years, when the necessity of such an institution, in the face of the great development of the public hospitals throughout all Western Pennsylvania, and bordering States was no longer apparent.

Abdominal surgery, for sixteen years before, a slowly unfolding book, was now open, and operators were to be found in all cities, and in a great many country towns. *Pari passu* with the development of hospitals and operators, great advance has been made in the methods of operating.

Re-section of the intestine, which I had successfully done with needle and thread, as early as 1883, was now accomplished in a few moments by the aid of the Murphy button.

The stump in supra-vaginal hysterectomy, like the pedicle in ovariectomy, was no longer secured in the lower angle of the abdominal wound. Myomectomy had grown more into favor, and an era of conservatism, with reference to puncture or resection of the ovary, had opened up to contest much of the field previously occupied by radical salpingo-oöphorectomy.

The great key which had unlocked the door, and let in the light on the already rapidly developing field of intra-abdominal surgery, was the Trendelenberg posture. It enabled the operator to view in position, the pathological contents of the pelvis, and to act with more intelligence and precision in operating. With the aid of this position, intra-pelvic surgery has been made comparatively easy.

In 1882, when I was in Vienna, Pawlik was catheterizing the ureters, and had fully demonstrated its practicability and advantages. Dr. Howard Kelly has, however, assisted greatly by the use of improved instruments, in crystallizing Pawlik's original discovery, and the addition of the galvanic cystoscope has crowned all efforts. With the aid of the Trendelenberg posture and catheterization of the ureters, Kelly's work has been pre-eminently good. The work of both will be superseded by X Ray diagnosis in renal calculi.

The plastic work in the vagina, which was done by scissors and silver wire suture, has largely given away before European methods, accomplished with the knife and silk or catgut sutures.

The facts in the matter are, that gynecological and abdominal surgery have, within the last five years, become distinctly a part of general surgery. The principles of abdominal and pelvic surgery established by the specialists are now common property.

Pittsburg has always had good surgeons, men who have done most creditable work in their day, and who have gone, leaving behind them only a few scattered Medical Journal reports of what they did.

My work links the old with the new era of abdominal and pelvic surgery, which is destined to be brilliant and scientific in this city. Reference is made in these notes, including those cases operated upon during eight years preceding the opening of the Private Hospital in 1883, to between four and five hundred operations. The limit of the volume will not permit of more.

The cases contained in the volume are not intended to represent all of my work. They are enough to substantiate my claim to having been the first Specialist, and a pioneer in this department of surgery in Western Pennsylvania, and to show the part that Pittsburg surgery has taken in its development. They will also render assistance to others who are interested in the subject.

My work continues, at the Passavant Hospital, with that of other colleagues, while others, in conjunction with other hospitals, are doing most excellent work.

515 Penn Avenue,

PITTSBURG, PA., July, 1901.

OVARIOTOMY.

Mrs. —, aged 26. Referred by Dr. Parke, of Wellsville, O. Nullipara. Abdomen has been enlarging gradually and painlessly for about one year. The diagnosis of ovarian cyst is readily established.

OPERATION, OCTOBER 26, 1883. Incision in the linea alba. Cyst tapped and delivered. Pedicle tied with sterilized silk ligature and dropped into the pelvis. Wound closed with interrupted silk worm gut sutures. Cyst and contents weighed twelve pounds. Time occupied in operation, thirty minutes. All ligatures and sutures were scalded, and sponges were used.

Result. Wound healed by first intention. Patient returned home twenty-six days after operation.

Subsequent Notes.

Since her recovery she has had two children, the oldest of whom is now about twelve years of age.

Remarks.

At this period I had given up entirely the use of carbolyzed spray, and the bath in which the instruments lay consisted of simple boiled water drawn from the tap. In the preparation of the hands, soap and water, turpentine and a brush and nail scissors constituted the means used. The abdomen of the patient was prepared by scrubbing the surface with soap and water, and irrigating it with a 5% solution of carbolic acid.

Mrs. —, aged 36. Referred by Dr. Patton, of West Newton, Pa. Widow. Diagnosis, ovarian cyst, which has been growing about one year.

OPERATION, NOVEMBER 8, 1883. Incision in the linea alba. Cysts tapped and delivered. Pedicle ligated with carbolized silk ligature, and dropped into the pelvis. Wound closed with interrupted silk worm gut sutures. Cysts and contents weighed eighteen pounds.

Result. Wound healed by first intention. Patient returned home twenty-two days after operation.

Subsequent Notes.

November 19, 1900, patient still living, in good health.

Mrs. —, aged 30. Referred by Dr. Anderson and Dr. Emery, of Venetia, Pa. Abdomen contained a very large multilocular cyst. Health badly broken. Suffers a great deal of pain.

OPERATION, DECEMBER 28, 1883. Incision in the linea alba. Adhesions to the abdominal wall and omentum, broken up with the hand. Bleeding vessels in the omentum ligated with sterilized silk. Cysts tapped and delivered. Pedicle ligated with carbolized silk ligature. Baker-Brown's clamp applied to the pedicle above the ligature, pedicle severed above and at the clamp with the hot iron. Pedicle dropped into the pelvis, into which a pitcher of hot water was poured and sponged out. Wound closed with interrupted silk worm gut sutures and covered with iodoform. Cysts and contents weighed twenty-five pounds.

Result. Wound healed by first intention. Recovery uneventful. Returned home twenty-two days after operation.

Subsequent Notes.

The patient has borne several children since the operation, and was still living and in good health at last report.

SUPRA-VAGINAL HYSTERECTOMY.

Miss —, aged 25. Referred by Dr. Ackerman, who in his letter asked if I would do a Porro operation for a patient of his. Present, Drs. Ackerman and Baguley of Wheeling, Findley of Altoona, Rahauser and Stone of Pittsburg. Patient has suffered intolerable pain at her menstrual periods for twelve years. The uterus is sharply ante-flexed and there is marked salpingitis and ovaritis. A cystitis is also present. There is a history of gonorrheal infection.

OPERATION, FEBRUARY 2, 1884. Median incision. The ovaries and tubes were removed. The ovaries were small and very dense. The tubes highly congested. A silk ligature on a Peaslee's needle holder was passed through the supra-vaginal cervix from before backwards. One half the ligature embraced one half the cervix and corresponding uterine artery. The other half the ligature, the opposite half and artery. The fundus was cut away above the ligatures, leaving a wedge-shaped opening in the stump, which was closed with silk worm gut sutures. The cervix was now dropped into the pelvis, into which a pitcher of hot water was poured and sponged out. Wound closed with interrupted silk worm gut sutures.

Result Uneventful recovery. Out of bed on the fourteenth day. Returned home March 8.

Subsequent Notes.

At a comparatively recent period, the patient was reported as having enjoyed excellent health since her operation.

This is probably the first case in the world in which a supra-vaginal hysterectomy followed salpingo-oöphorectomy for gonorrheal infection.

It is undoubtedly the first supra-vaginal hysterectomy done for dysmenorrhea of any type. The supra-vaginal amputation of the uterus was suggested by Dr. Ackerman before I saw

the patient, because of gonorrheal infection of the endometrium. With a view of correcting the posterior misplacement of the fundus, I would have made anterior fixation of it to the abdominal wall, as I had seen Thomas Keith do. Anterior or ventral fixation of the fundus uteri was first suggested and accomplished by Kœberle, from whom Keith learned it.

But, the needle punctures in this case bled freely, and rather than leave the wounded, oozing fundus, in the pelvis, I made supra-vaginal amputation of the body of the uterus, completing the operation of supra-vaginal hysterectomy, including the ovaries and tubes, as suggested by Dr. Ackerman in his letter.

Miss —, aged 39. Referred by Dr. Findley of Altoona, Pa. Patient has been suffering from fibroid tumors of the uterus for six years. Profuse menorrhagia and metrorrhagia, and constant dysuria. Present, Drs. Findley, Rahauser and Stone.

OPERATION, FEBRUARY 20, 1884. Long incision in linea alba. Uterus and four fibroid tumors developing in it, were drawn well upwards. The ovarian arteries were ligated. A heavy silk ligature was passed double by means of Peaslee's needle antero-posteriorly through the supra-vaginal cervix. One half of the ligature was tied constricting one half of the cervix and the uterine artery, the other half of the ligature embraced the opposite side of the cervix and uterine artery. The uterus and tumors were cut away leaving a wedge-shaped incision in the cervix uteri, which was closed by silk worm gut suture. The peritoneum being included in the suture. Abdominal wound closed by interrupted silk worm gut sutures.

Result. Uneventful recovery. Returned home Mar. 23, 1884.

Subsequent Notes.

Patient was still living when last heard from, and enjoying good health.

VAGINAL ENUCLEATION OF FIBRO-MYOMA.

Mrs. —, aged 36. Multipara. Two years ago Dr. Hasler discovered a large growth occupying the vault of the vagina, and having the physical characteristics of a fibroid tumor. At this time the growth was as large as a foetal head. It occupies the posterior lip and posterior wall of the uterus. The anterior lip of the uterus cannot be seen nor felt. Present, Drs. Stone, Huselton and Lindley.

OPERATION, MARCH 11, 1884. The patient was placed in the left lateral, or Sims' position, and the perinaeum was well retracted with a Sims' speculum. The posterior surface of the tumor was now exposed and its capsule was divided for a distance of about three inches from above downwards, with the Pacquelin cautery. The capsule was a full half inch thick. The Thomas spoon saw was now introduced under the capsule and carried around the tumor in all directions, peeling off the capsule. Heavy vulsellum forceps were anchored in the substance of the tumor, and traction was made downwards, while the spoon saw was continuously liberating the tumor from its capsule, the speculum having been withdrawn. Finally, at the end of thirty minutes, the tumor, almost as large as a child's head, was delivered, with the aid of obstetric forceps. The speculum was reintroduced and the bleeding cavity was sponged out. Ten or twelve pairs of lock-handled forceps were applied to bleeding points within the capsule. At the end of forty-eight hours the forceps were removed, and the speculum reintroduced and the cavity washed out with a hot three per cent. solution of carbolic acid. Daily irrigation of the vagina was followed for two weeks longer.

Result. Recovered.

 DOUBLE OVARIOTOMY FOR LARGE CYSTS, WITH SUPRA-VAGINAL
 AMPUTATION OF THE UTERUS.

Mrs. —, aged 28. Referred by Dr. McCune. The patient,

a strumous woman with chronic granular conjunctivitis. She has never menstruated. She has a cyst tumor reaching above the umbilicus, apparently developed from the right ovary, and a second one from the left ovary. The uterus is retroverted and fixed. Present, Drs. Stone, Rahausen and Gill.

OPERATION, MARCH 28, 1884. Central incision in linea alba. Tumor on the right side tapped, no pedicle found. The cyst shelled out of the broad ligament. Cyst on the left side reaching almost to the umbilicus tapped and shelled out of the left broad ligament. Double ligature passed through the supravaginal cervix, which was ligated in halves and amputated above the ligature with the Pacquelin cautery. The ragged broad ligaments were stitched up with interrupted silk sutures. The pelvis was washed out with hot water and sponged dry. A glass drainage tube reaching to the bottom of the pelvis was left in the lower angle of the wound, which was closed by interrupted silk worm gut sutures. The drainage tube was removed on the following day and the opening closed by an additional suture.

Result. The patient began vomiting soon after being put to bed. Hot water, ices, champagne, and various other remedies failed to have any effect upon the vomiting, which was still continuing on the third day after operation. Her nurse, a young woman of more than ordinary good sense, seeing my perplexity, whispered to me: "Doctor let me try her for a day or two." I said, "all right," and left the room. On the second day following I went into the room and the nurse said to me, "I guess she is all right now." I gave no directions concerning the patient and went away. On the following day I went into her room, found her doing well, made no suggestions and signalled the nurse to follow me into the hallway. I said to the nurse: "Mary, what did you give this woman, that stopped her vomiting?" She replied, "Doctor, I gave her just what she has

been raised on, boiled pork and cabbage." The patient made a good recovery, returning home a month later.

OVARIOTOMY.

Mrs. —, aged 28. Referred by Mrs. Cherry, Pittsburg, Pa. Has an enormous multilocular cyst, ovarian. Is very thin and anæmic. The band of her skirt measures fifty-two inches in length. Present, Drs. Stone, Bane and J. P. Sterrett.

OPERATION, APRIL 22, 1884. Central incision, fifteen inches long. Extensive adhesions to the intestines and lower border of the liver. The intestines are studded over with small, yellow crowned tubercles. All adhesions having been separated, and the tapped cysts delivered, the pedicle was ligated with carbolized silk ligature, and divided with the Pacquelin cautery. Many bleeding points were tied with fine silk, where intestinal adhesions had been separated. The torn surface of the liver was literally cooked with the Pacquelin cautery. The abdomen was flushed out with hot water and sponged dry. A little iodoform was dusted over some raw points and the wound was closed with interrupted silk worm gut sutures, and dressed with iodoform. Time consumed, one hour. The cysts and fluid weighed forty-six pounds.

Result. The patient suffered somewhat from emesis and Cheyne-Stokes respiration. The wound healed by first intention. The temperature was normal on the fourth day and her recovery uninterrupted.

Subsequent Notes.

November 19, 1900, patient is still living, and in good health.

Mrs. —, aged 48. Referred by Dr. J. P. Hassler, Conneautville, Pa. Multipara. Large, apparently solid tumor,

perfectly movable in the peritoneal cavity, which is greatly distended with ascitic fluid. Patient presents the appearance of prolonged suffering. She was subjected to supporting and preparatory treatment, consisting of tonics and concentrated nutrition for thirteen days prior to operation. Present, Drs. Stone and Fundenberg.

OPERATION, MAY 12, 1884. Long central incision below umbilicus. Large quantity of ascitic fluid evacuated. Peritoneum greatly congested. A cysto-sarcoma, almost solid weighing five and one half pounds, with a long pedicle, was turned out of the cavity. The pedicle was ligated with silk, and divided with the Pacquelin cautery. Some hot water was poured into the pelvis, which was sponged dry. A glass drain tube was left in the lower angle of the wound which was closed by interrupted silk worm gut sutures. During the following forty-eight hours it was estimated that a quart of bloody serum had been evacuated from the drain tube. The discharge having lost its color, the drain tube was removed at about the fiftieth hour after operation.

Result. At the close of the third day, or to be exact, two hours later, her husband entered her room and suddenly announced to her that one of her near relatives had dropped dead, a day or two previous. She was profoundly startled, placed her hand upon her chest and complained of great pain and difficulty in breathing. These symptoms persisted for twenty-two hours, when she died.

Autopsy. Peritoneum free from all congestion, contained no ascitic fluid. Large clot in left pulmonary artery. The clot probably started on its journey from a very large vein in the pedicle, and embraced by the ligature. The sudden shock which the woman received may have had or not, something to do with setting it free. These clots are dislodged and propelled toward the heart by sudden movements, friction or massage, intra-vascular pressure and possibly by sudden relaxation of the

vascular walls, followed by dilatation. A sudden shock, such as given in this case, would affect the sympathetic nervous system controlling the tonicity of the vessels. The walls of the vessels, the vaso constrictors, would suddenly relax and set the clot free.

Visitors to patients confined to bed after intra-peritoneal operations are a source of danger.

Mrs. —, aged 51. Referred by Dr. W. J. Langfitt, Allegheny, Pa. Multipara. Tumor was recognized one year ago. Recently she had a severe attack of peritonitis. Present, Drs. Stone, Langfitt and George Keith, of Edinburgh, Scotland.

OPERATION, MAY 29, 1884. A five-inch central incision revealed a multilocular cyst, with extensive parietal adhesions. Some of the cysts contained fluid contents, others were filled with colloid. A short pedicle was tied with silk, and divided with the Pacquelin cautery. Drainage for subsequent twenty-four hours.

Result. Recovery uneventful.

Subsequent Notes.

Patient married a few weeks after the operation, and was living some years afterwards.

Miss —, age 22. Referee unknown. Tumor discovered by herself twenty-two months previously. Patient in fairly good health, but largely distended. Present, Drs. Stone, Langfitt, Mundorff and Mr. George Keith, of Edinburgh, Scotland.

OPERATION, JUNE 5, 1884. Two and one-half inch central incision, no adhesions, pedicle short, thick and broad, surrounded by Baker-Brown's clamp, and burnt off with hot iron, flush with the clamp. Wound closed with interrupted silk worm gut sutures.

Result. Uneventful recovery.

Subsequent Notes.

November 20, 1900, patient still living.

LAPAROTOMY FOR LARGE PELVIC ABSCESS.

Mrs. —, aged 32. Referred by Dr. J. Q. Robinson, West Newton, Pa. The history as given was that of pelvic inflammation following last confinement. The abscess had been tapped per vaginam, some months previously, and re-filled again. The patient was unable to walk erect, and suffered a great deal of pain. Fluctuation can be detected almost as high as the umbilicus.

OPERATION, JUNE 24, 1884. A central incision, two and one-half inches in length, exposed the anterior wall of the abscess sac, which was carefully stitched to the peritoneum at the margin of the wound. A sharp pointed bistoury was now pushed into the abscess. The opening through which the pus was now flowing, was enlarged by the scissors, and a large glass drain tube was passed to the bottom of the abscess sac, which was quite thoroughly cleaned out by irrigation, with 2½ per cent. carbolic acid solution. The large tube remained in the sac eight days, when a rubber tube was substituted for it, which remained six days longer, when it was removed.

Result. The cure was permanent.

Note. I followed the teaching of one of my old masters, Mr. Lawson Tait, in the treatment of this case, and I think this was the first laparotomy deliberately made for the cure of pelvic abscess, in the United States.

LAPAROTOMY FOR FIBROID OF THE UTERUS.

Miss —, aged 39. Referred by Dr. David McKinney, Four years ago she began to suffer from severe pain referred to the pubic region. She necessarily resorted to the use

of morphia, and now takes three grains per diem. She is much emaciated, feeble, pulse quick, temperature 99.4. Bi-manual examination reveals a solid tumor, apparently about the size of a lemon, occupying the space between the fundus uteri and bladder, and quite immovable. A portion of the tumor can be felt above the pubic symphysis. Present, Drs. Stone and McKinney.

OPERATION, JULY 12, 1884. A central incision was carried down as closely as possible to the pubic symphysis. The tumor was dissected from the posterior wall of the bladder, and with the finger its capsule was freed from a bed of adhesions, when it was drawn out of the wound, and found to be connected with the fundus uteri, by a slender pedicle which was divided. The wound was closed by interrupted silk worm gut sutures.

Result. Good recovery, with complete relief.

Note. Subsequent reflection concerning this peculiar case, has led me to the opinion that the inflammation which fixed the fibroid tumor in this peculiar fashion, was due to torsion of the pedicle. Fibroids in this position, when they have attained any considerable magnitude, as a rule retrovert the uterus.

SALPINGO-OÖPHORECTOMY, FOR INSANITY.

Mrs. —, aged 31. Referred by Dr. J. P. Sterrett, Pittsburg, Pa. Patient has for a long time had a severe dysmenorrhoea. Bi-manual examination revealed a uterus retroverted, and but slightly movable. The left ovary can be felt prolapsed. To the right of the uterus a doughy mass is felt. Present, Drs. Stone and Sterrett.

OPERATION, SEPTEMBER 16, 1884. A two and one-half inch incision in the linea alba. Two fingers were introduced and all adhesions were broken up. The ovaries and tubes on both sides were now removed and a drainage tube was placed

in the lower angle of the wound. Wound was closed with silk worm gut sutures, down to the tube. The latter was removed in twenty-four hours.

Result. Second night slipped out of bed while the nurse was asleep and walked about the house until discovered. She made an uneventful recovery. She came to see me about ten years after her operation, and in the course of a long interview with her, I learned that in the year following her recovery she took service in a laundry, earning and saving money, with which she finally bought a lot, selling it subsequently at a profit, and adding her earnings to her profit she had continued to do this, until she told me she had accumulated \$5,000. And that after the first year she had no further disturbance with her head. She appeared to be in physically good condition.

SALPINGO-OÖPHORECTOMY FOR HYSTERO-EPILEPSY.

Miss——, aged 25. Referred by Dr. Chessrown, Pittsburg, Pa. Was admitted to the Hospital, coming directly (without my knowledge) from the presence of typhoid fever in her own family. She had been exposed to typhoid fever poison for three weeks. She was not well, but the true cause of her indisposition was not suspected.

OPERATION, SEPTEMBER 22, 1884. Uncomplicated, simple salpingo -oöphorectomy, through a two-inch, central incision, completed in fifteen minutes, and almost bloodless.

Result. She developed typhoid fever, and died in the beginning of the third week. The attack was ushered in immediately after the operation by a slight chill, severe headache, and epistaxis. Throughout the attack she was attended by her family physician, Dr. Chessrown.

Remarks.

This case teaches an important lesson. It is this: inquire into the previous environment of all surgical cases, who leave

home and present themselves for operation. Had fifteen days been allowed to elapse from the date of admission to the Hospital, this patient would not have been operated upon at a critical time.

SUPRA-VAGINAL HYSTERECTOMY FOR LARGE FIBROID.

Mrs. —, aged 28. Referred by Dr. Meyers. Nullipara. A strong woman with an enormous fibroid tumor, which fills the pelvis and reaches to the ensiform cartilage. Present, Dr. Joseph Taber Johnson, of Washington, D. C.

OPERATION, SEPTEMBER 14, 1884. Long median incision. The uterus and broad ligaments were raised high up and the former was spread out upon the surface of the tumor, as flat as a pan-cake, bearing but little resemblance to its original form. The ligaments were tied en masse, including the ovarian arteries and divided with the scissors. The uterus was cut across above the vaginal attachment, the uterine arteries secured, and the tumor, weighing fifteen pounds, pulled out of the pelvis. Some suturing was done in the floor of the pelvis which was subsequently sponged dry.

Result. She did very well for three days. On the fourth had nervous twitchings of the extremities, and a convulsion at the close of the day. At the end of the fifth day she died in a convulsion. Her death was recorded as due to tetanus.

OVARIOTOMY.

Mrs. —, aged 36. Referred by Dr. Welch, Coal Bluff, Pa. Multipara. Patient was very much distended. Tender over the lower abdomen. Has some temperature. History of repeated attacks of colicky pain. Diagnosis, ovarian tumor, twisted pedicle.

OPERATION, MARCH 7, 1885. Central incision. A large multilocular cyst is found arising from the right ovary. One-half of the omentum is adherent upon its anterior surface. The latter is separated, its vessels ligated. Several cysts were tapped and the pedicle reached. The latter was found twisted. A second multilocular cyst of considerable size arose from the left ovary. Both pedicles were treated by Baker-Brown's clamp and cautery. The wound was closed with interrupted silk worm gut sutures, and dressed with iodoform.

Result. Patient discharged in good condition nineteen days later. Time consumed at operation, fifty minutes.

LAPAROTOMY (EXPLORATORY).

Miss —, aged 37. Referred by Dr. Wm. Findley, Altoona, Pa. Has suffered from a fibroid tumor for nine years. It fills the pelvis and reaches to the umbilicus. Has the history of several attacks of peritonitis. She is a constant sufferer from menorrhagia and her nervous system is breaking down. Has been examined by Dr. Helmuth of New York, and Dr. Goodell of Philadelphia. The latter declined to attempt the removal of the tumor. It required considerable effort to determine to undertake this case. However I suggested that I would make an exploratory incision, and see what I could do.

OPERATION, April 7, 1885. An incision four inches long, in the median line, exposed the abdominal cavity to view. The peritoneum in every direction was highly congested, and some ascitic fluid escaped through the incision. The fingers could not be advanced to any extent along the posterior surface of the tumor, which was firmly fixed. The left ovary was high up on the left side of the tumor, and the right one could not be found. I decided not to attempt its removal. The peritoneal cavity was irrigated with hot water, and the wound was closed

with interrupted silk worm gut sutures and healed by first intention.

Result. I felt very much disappointed at the failure to remove this tumor, and supposed that I had subjected this young woman to unnecessary pain and expense. Two years later a report came to me that since the exploratory incision had been made she had lost many of her former painful symptoms and was improving. On the tenth of April, 1891, I was informed that the growth of the tumor had been entirely arrested and that she was in excellent condition, and able to attend to some business. It is probable that the exposure of the peritoneum and the irrigation with hot water, cured the chronic peritonitis, which was present. With our knowledge of these tumors at that time, had I removed the tumor, she would have died. At this time, nearly sixteen years later, I would have removed the tumor and not unlikely, would have saved the patient.

SALPINGO-OÖPHORECTOMY.

Mrs. — aged 40. Referred by Dr. Cook, McDonald, Pa. Has suffered many years from pelvic disease. Her uterus is retroverted. The cervix lacerated. Both ovaries are prolapsed. She has given birth to five children, the youngest child five years old. Has difficult locomotion due to constant pain in the left leg. Her menstrual periods are painful, only at the close.

OPERATION, June 10, 1885. Two and one-half inch, central incision. Both ovaries and tubes removed. Wound closed by interrupted silk worm gut sutures. Iodoform dressing. The right ovary was as large as a black walnut, and contained a bunch of hair and a small bit of bone. The dermoid being congenital, must have been with her always, and her right ovary must have been the active one.

Result. Subsequent health excellent, still living and in excellent health sixteen years after the operation.

Note. To illustrate the evolution which has occurred in the treatment of pelvic diseases during the last sixteen years, this case might have been treated in the following way: the patient being forty years of age, with a lacerated cervix, and diseased uterine appendages, a total vaginal hysterectomy could have been done, thus curing her malady, and securing her against possible uterine cancer in the future. Or a colpotomy could have been substituted for a laparotomy.

Miss —, aged 23. Referred by Dr. John Sloan. Changed first at fourteen years of age, since which date she has spent one week out of every month in bed. In addition to this, she has severe attacks of pain half-way between the periods. Intra-menstrual pain coincident with ovulation.

OPERATION, JUNE 27, 1885. Central, two-inch incision. Appendages removed. Chronic salpingitis and cystic degeneration of both ovaries.

Result. Recovery, with restoration to health.

LAPAROTOMY (EXPLORATORY).

Mrs. —, aged 36. Referred by Dr. Huselton, Pittsburg, Pa. Multipara. Has had attacks of severe peritonitis. Has dangerous menorrhagia and metrorrhagia. Very anæmic and neurasthenic. Per vaginam the uterus is fixed, very slightly movable, and the pelvis itself contains a doughy mass.

OPERATION, NOVEMBER 18, 1885. Central incision three inches long. The right ovary was found with its tube adherent. They were loosened up as was also the uterus, from some posterior adhesions. A cyst, about the size of an orange, was now encountered to the left of the uterus. It was shelled out of a

bed of adhesions, and several coils of intestine were adherent to its upper surface. The right ovary and tube were now removed. A clear surface on the cyst was exposed, and a capillary trocar was introduced into the cyst, which was found to be par-ovarian. With the scissors, I cut away a portion of the cyst, leaving a large hole in it, and dropped it back with the adherent intestines. A glass drainage tube was left in the pelvis, protruding at the lower angle of the wound.

Result Patient made a good recovery, and was restored to health.

The reader may observe the caution exercised. The intestinal adhesions were not disturbed. At the present date these adhesions would all properly be separated.

SALPINGO OÖPHORECTOMY.

Mrs. —, aged 36. Referred by Drs. Green and Werder, Pittsburg, Pa. Nullipara. Has gonorrheal salpingitis and ovaritis.

OPERATION, NOVEMBER 19, 1885. Central incision. Both ovaries and tubes adherent. The right ovary and tube removed. The left ovary and tube abandoned.

Result. Recovered.

Note. To call attention to the evolution in the treatment, I would at this date, in this case have done total vaginal hysterectomy.

OVARIOTOMY.

Mrs. —, aged 25. Referred by Dr. Case, Ashtabula, Ohio. Nullipara. Widow. During the last few years has been tapped three times. The size of this patient's abdomen is immense and the patient is greatly emaciated. Present Drs. Stone, Case, Thomas, Green and Lemmer.

OPERATION, NOVEMBER 24, 1885. Two large multilocular ovarian cysts were exposed by a long central incision. One of

the cysts was ruptured and leaking into the cavity. A great deal of peritonitis was present. Seventy-five pounds of fluids and cysts were removed. The left tumor contained many papillomatous cysts. Many adhesions had been separated. Many ligatures had been applied, and many bleeding points had been seared with the Pacquelin cautery. The abdominal cavity was irrigated with boiled water and a drainage tube, glass, was left in the lower angle of the wound. The wound was closed with interrupted silk worm gut sutures, down to the tube. The tube was left in forty-eight hours, and discharged twenty-four ounces of blood and bloody serum.

Result. On the twelfth day she developed what appeared to be peritonitis, but which subsequently proved to be the formation of a peri-nephritic abscess, which I opened on the twenty-third day after operation, and into which I inserted a drain tube, washing out the cavity with antiseptic washes. without accomplishing a cure, until the seventeenth of February following, or eighty-eight days after operation, when she died of exhaustion.

SALPINGO OÖPHORECTOMY.

Miss ——. Referred by ———. Has a history of chronic vaginitis. Immediately prior to the appearance of which she was seized and subjected to sexual intercourse by an employe on their country place. Bi-manual examination reveals a pus tube on the right side.

OPERATION, JANUARY 1886. Central incision, removal of pus tube and corresponding ovary.

Result. Prompt recovery followed. At the time of the operation I asked permission to remove the other tube and ovary, which request was refused. Subsequently a pus tube developed on that side, and I successfully removed it. Patient recovered, remaining well subsequently.

Miss —, aged 30. Referred by Dr. Floyd. Ten years ago after wearing an illfitting pessary, for some time, acquired a painful condition referred to the right iliac region. Has severe dysmenorrhoea. Bi-manual examination reveals a mass in the pelvis to the right of the uterus.

OPERATION, OCTOBER 1, 1886. Short central incision, right ovary and tube found adherent. The ovary and tube were removed. The left ovary and tube were left. Time consumed, twenty minutes.

Result. Recovered with improvement steadily following, for a few weeks, when an attack of pelvic peritonitis intervened.

Returned to the hospital November 9, 1887. She had been suffering from recurrent pelvic peritonitis for six months, and bore the evidence of considerable suffering. Her mother at the time of the first operation, had urged that unless it was absolutely necessary, the operation should be limited to one ovary and tube.

SECOND OPERATION, NOVEMBER 17, 1887 Thirteen and one-half months after the first operation.

Short incision in line of former wound. Small quantity of ascitic fluid found in the pelvis. Site of first operation found satisfactory: No trace of ligature discoverable. The remaining ovary and tube were brought up into the incision. The ovary was pultaceous and very much enlarged, the tube was several times larger than normal, and very much congested. They were tied off with silk and separated with the Pacquelin cautery.

Result. Recovered with a cessation of all former symptoms.

Note. The reader will observe that this is the second case in whom one ovary and tube was left, at the request of friends. Both patients being compelled to return for the removal of the remaining ovary and tube. In the first case the infection was specific, and in this case probably tubercular.

Since this date, I have removed the appendages on both sides in all such cases.

OVARIOTOMY.

Mrs. —, aged 36. Referred by Dr. Newcomer, Connellsville, Pa. Multipara. Rapid enlargement of the abdomen for ten months. Menorrhagia and metrorrhagia. Diagnosis, ovarian cyst.

OPERATION, NOVEMBER 20, 1886. Central incision, cysts tapped and removed. Pedicle tied with silk, and divided by Pacquelin cautery. The right ovary was found diseased and removed. Wound closed with interrupted silk worm gut sutures. Time consumed, thirty minutes.

Result. Recovered and is still living at this date, November 21, 1900.

SALPINGO OÖPHORECTOMY.

Mrs. —, aged 31. Referred by Dr. Rose, Rochester, Pa. Bimanual examination reveals an enlarged and tender right ovary.

OPERATION, DECEMBER 7, 1886. Short central incision, right ovary and tube removed. Wound closed by three silk worm gut sutures. Time consumed, seven and one-half minutes.

Result. Patient called at my office August 3, 1887, to say that she is in perfect health. Has borne children since recovering from the operation.

LAPAROTOMY FOR PUS TUBES.

Mrs. —, aged 27. Referred by Dr. B. B. Smith, Allegheny, Pa. Nullipara. Painful swelling behind and to the left of the uterus. Sexual intercourse intolerable. Husband has abandoned her.

OPERATION, DECEMBER 15, 1886. Long central incision, viz: three and one-half inches. The left ovary with a large tube distended with pus, were completely removed. The opposite ovary and tube, both pathological, were also removed.

Result. Patient made a complete recovery, and some months later, rejoined her husband. She had discovered his whereabouts in a neighboring state. She plead her own cause and they have lived happily together since.

OVARIOTOMY.

Mrs. —, aged 48. Referred by Dr. J. Q. Robinson, West Newton, Pa. Widow. Six children. Youngest sixteen years old. Four years ago, developed abdominal tumors. Has been tapped eleven times, in all about ninety-nine gallons of fluid have been removed from this woman's abdomen. She is now very much distended and has a chronic bronchitis, to complicate matters.

OPERATION, JANUARY 4, 1887. Central incision. Five gallons of ascitic fluid were first removed. Two multilocular ovarian cysts remain, filling the pelvis and lower abdomen. Both cysts proved to be intra-ligamentary. Both were gotten away with the greatest possible difficulty. A great many bleeding points were ligatured. The operation lasted forty-five minutes, during which time her breathing was frequently interrupted. The wound was closed with interrupted silk worm gut sutures, and dusted with iodoform.

Result. Six days after operation, she died of capillary bronchitis.

Note. The operators of the present day rarely encounter the desperate cases who had been subjected to repeated tappings, which were so frequent eighteen or twenty years ago.

Mrs. —, aged 31. Referred by a neighbor. Has had an intra-abdominal tumor for four years. Diagnosis, multilocular ovarian cyst.

OPERATION, MARCH 7, 1887. Assisted by Dr. Heustis, now of Dubuque, Iowa. Central incision, separation of adherent omentum, tapping and delivery of cysts, pedicle tied with silk, burnt off with the Pacquelin, all in seven minutes. Cavity irrigated with hot water, dried out, wound closed by interrupted silk worm gut sutures, dressed with iodoform. Finished entirely in forty minutes.

Result. Prompt recovery. Patient was still living recently.

Miss —, aged 38. Referred by Dr. J. J. Green, Pittsburg, Pa. An abdominal tumor of four or five years' growth, is surrounded by a large quantity of ascitic fluid, two gallons of which were drawn off, through a small trocar, four days previous to operation. During the intervening days she was given quinine and stimulants.

OPERATION, MARCH 9, 1887. A central incision, eight inches long revealed in the abdominal cavity a very large tumor, somewhat pear shaped, as white as a turnip, its lower end occupying the pelvis, and its upper end reaching almost to the ensiform cartilage. Careful examination with the hand revealed the fact that it was not springing from the uterus, which was above the brim of the pelvis, and pushed to the left side. The tumor appeared to be perfectly solid, adhesions to the right lateral parieties and numerous coils of intestine were separated, and a great many bleeding points were ligated. I determined to deliver the tumor by morcellement, and thrust a strong bistoury into the presenting part of it, and cut out a large piece. Through this opening about three pints of fluid escaped from the interior of the tumor. The same white color was found to pervade the entire thickness of its wall. With the bistoury I cut it to pieces until it was so reduced that I could draw the remainder of it through the eight inch incision in the abdominal wall. It was now discovered that the tumor arose from the right ovary by a thick pedicle, which was ligatured, burnt off

and dropped. The tumor was in structure to be compared to a large melon, in the center was a large cavity, and its walls were from two to four inches in thickness, and the tumor itself was non-vascular. The abdominal cavity was flushed out with hot water, and the wound closed with interrupted silk worm gut sutures.

Result. The patient made a good recovery and was in good health one year after the operation, since which time I have lost track of her.

I had never but once before, nor have I but three times since, met with a similar case. The five cases belong to the class designated by Keith, as "weeping fibroids." Two of them apparently sprang from the ovary, and two from the broad ligament. None were attached to the uterus.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 32. Referred by Dr. Floyd. Specific infection three years ago. A mass felt on each side of the uterus, upon vaginal examination.

OPERATION, APRIL 16, 1887. Short incision. Adhesions separated with the fingers. Appendages drawn out, ligated, separated by the Pacquelin cautery. Quantity of pus in the tubes small.

Result. Discharged eighteen days later.

Miss —, aged 27. Referred by Dr. Elliott. Has had dysmenorrhea for many years, and a great deal of intra-menstrual pain. She is a chronic invalid. Bi-manual examination is painful. Has some enlarged lymphatic glands. Diathesis, scrofulous.

OPERATION, APRIL 26, 1887. Two inch, central incision, removal of appendages on both sides. Wound closed by interrupted silk worm gut sutures, dressed with iodoform.

Result. Discharged fourteen days later. Subsequent history unknown.

OVARIOTOMY.

Mrs. —, aged 36. Referred by Dr. Bostock, Pittsburg, Pa. Present Drs. Murray and Heustis. Eighteen or twenty months prior to operation the patient became the subject of persistent vomiting, associated with pain in the abdomen. This condition continued during the entire evolution of the tumor. She was treated by a number of medical men for the vomiting of pregnancy. I was asked to examine her a few days prior to operation and diagnosed ovarian cyst. The abdomen was quite as large as at full term of pregnancy.

OPERATION, NOVEMBER 3, 1887. Central incision, cysts tapped, delivered, pedicle ligated, divided with Pacquelin cautery. The other ovary found cystic and removed. Wound closed by interrupted silk worm gut sutures, and dressed with iodoform. Time consumed, twenty-four minutes.

Result. Recovered. Returned home twenty-two days later.

REMOVAL OF PAR-OVARIAN CYST.

Mrs. —, aged 27. Referred by Dr. Newcomer, Connellsville, Pa. Multipara. Last child born four months ago. Abdomen greatly distended and fluctuation is distinct everywhere.

OPERATION, NOVEMBER 9, 1887. A central incision opened the cyst, which was adherent to the abdominal wall. The contents of the cyst was rapidly evacuated. It consisted of liquid as clear as spring water. The cyst was separated from the abdominal wall, its pedicle, including the ovary and tube, ligated, divided with the Pacquelin cautery, and dropped. A large oozing surface on the anterior abdominal wall was smeared over with a saturated solution of per-chloride of iron, in glycerine, and mopped dry with a towel.

Result. Discharged, well, sixteen days later.

Par-ovarian cysts rarely attain so great a size as in this case. Their endothelial lining membrane may be enucleated after Minor's method, and the tube and ovary may be saved. In this case enucleation was rejected because the external layer of the cyst had been separated from extensive adhesions, and was liable to infection.

LAPAROTOMY (EXPLORATORY.)

Mrs. —, aged 40. Referred by Dr. Wallace, East Brady, Pa. Has had dysmenorrhea from the onset of menstruation. Married at eighteen. Miscarried six months later, infection, followed by pelvic inflammation, repeated attacks since that date, of peritonitis. Roof of pelvis solid on the left side. Is a chronic invalid, with constitutional infection.

OPERATION, DECEMBER 16, 1887. Central incision. Extensive adhesions exist between numerous coils of intestine, abdominal walls and pelvic contents. Two fingers can be introduced to the right of the uterus. Corresponding ovary and tube not definable. To the left of the uterus the space is filled, ovary and tube not definable. Wound closed.

Result. Discharged two weeks later. Wound healed.

Note. Several years later Dr. Joseph Price of Philadelphia reopened the abdomen and resected a section of the small intestine successfully.

Mrs. —, aged 41. Referred by Dr. Geo. McNeil, Pittsburg, Pa. Changed at thirteen, dysmenorrhea until after birth of first child. First confinement normal. Health remained good until after a miscarriage at four months. Pelvic abscess one year ago.

OPERATION, JANUARY 12, 1888. Central incision. Entire pelvis filled by inflammatory exudates. Uterus, tubes and

ovaries fixed, and appendages buried in adhesions and exudates. Irrigation with hot water. Wound closed.

Result. Wound healed by first intention. Returned home disappointed.

Note. Two years later without further treatment, all exudate had disappeared, and she had been restored to perfect health.

Query. What effect had the laparotomy and irrigation on this case? It was followed by complete disappearance of pelvic exudates.

OVARIOTOMY.

Mrs. —, aged 31. Referred by Dr. Boal, Baden, Pa. Multipara. Youngest child four years of age. Diagnosis of ovarian cyst made by Dr. Boal one year ago.

OPERATION, MARCH 21, 1888. Central incision. Cysts emptied and delivered. Pedicle ligated with silk ligature and divided by the Pacquelin cautery. The left ovary cystic, also removed. The large tumor and contents weighed twenty pounds, one compartment of it was dermoid, containing hair, cartilage and sebaceous matter.

Result. Uneventful recovery, Patient at this date, November 22, 1900, still living.

Miss. —, aged 32. Referred by Drs. Eastman and Fuller, Uniontown, Pa. Diagnosis of ovarian cyst.

OPERATION, MAY 10, 1888. Central incision, four inches long. Cysts emptied and delivered. Pedicle tied and burnt off. Second ovary cystic and removed. No adhesions. Wound closed by interrupted silk sutures. Iodoform dressing.

Result. Uneventful recovery.

REMOVAL OF INTRA-UTERINE TUMOR.

Mrs. —, aged 60. Prolonged and frequent uterine hemorrhage. Present, Dr. J. H. Williamson, Resident Physician.

OPERATION, MAY 20, 1888. Extensive dilatation of the cervix uteri with steel dilator. Introduction of the finger locating the presenting end of a large intra-uterine polypus, which was then seized by strong forceps, wrenched from its bed and withdrawn. Cavity of the uterus irrigated and swabbed out with tincture of iodine.

Result. Recovered.

LAPAROTOMY.

Mrs. —, aged 34. Referred by Dr. Lindley, Perrysville, Pa. Nullipara. Married ten years. Miscarried soon after marriage. Became the subject of pelvic inflammation, has dysmenorrhea, menorrhagia and metrorrhagia and a soft mass, with a suspicion of fluid contents, fills the pelvis and lower abdomen. After admission to the hospital she was seized with a peculiar paroxysm bearing some relation to hysteria, followed by a period of unconsciousness and alarming dyspnea. I did not see her in the attack, but the resident physician, Dr. J. H. Williamson, told me that she would probably never survive a second attack of the same character.

OPERATION, MAY 22, 1888. Four inch incision in the median line. Omentum found adherent to a large pus sac on the left, to a par-ovarian cyst on the right. Par-ovarian cyst was emptied after separating it from the omentum. There being no pedicle, a large lumen was left in its wall, and the cyst dropped. In manipulating about the pus sac, it was ruptured and a large quantity of its contents escaped into the cavity of the abdomen. The opening in the pus sac was stitched in the lower angle of the abdominal wound, and a drain tube inserted. The abdominal cavity was carefully cleansed and the wound was closed down to the drain tube, with interrupted silk worm gut sutures. Iodoform dressing.

Result. She went along satisfactorily until the sixteenth day after the operation, when she had ceased to be a source of anxiety. At the close of the sixteenth day, she was seized with an attack identical with that which she had prior to operation. Dr. Williamson's prediction proved to be correct. She died in the attack.

Autopsy. By Drs. Williamson and Lindley. The abdominal cavity was found in excellent condition, entirely satisfactory. The examination of the peritoneal cavity was followed to completion without discovering the cause of death. From the history of both attacks, neither of which I witnessed, I suspected angina pectoris. It was proven beyond doubt that she had recovered from the operation.

OVARIOTOMY.

Mrs. —, aged 27. Referred by Dr. Bell, Butler, Pa. Multipara. Last confinement nineteen months ago. Abdomen remained large after confinement. Diagnosis of ovarian cyst by Dr. Bell. At the present time she is very large.

OPERATION, OCTOBER 11, 1888. Four inch incision in the median line. Cyst evacuated and drawn out, pelvis packed with sponges, Baker-Brown's clamp was placed above the ligature on the pedicle, and the latter was burnt off with the hot iron. Sponges removed. Wound closed with interrupted silk worm gut sutures. Dressed with iodoform. Time consumed in the operation, twenty minutes.

Result. Uneventful recovery.

SALPINGO OÖPHORECTOMY.

Mrs. —, aged 47. Referred by former patient. Has had eight pregnancies, and six children born at term. Has history of specific infection. One ovary is felt enlarged and

adherent in the cul de sac of Douglass. Patient suffers from melancholia. Cervix lacerated, as is also the introitus vagina.

OPERATION, OCTOBER 30, 1888. Short incision, removal of appendages on both sides. Time consumed, eight minutes.

Result. Recovery uneventful.

Note. A letter received from this patient dated May 17, 1898, almost ten years after the operation, says that she was much improved, but not cured by the operation. At this date I would have made a total vaginal extirpation in the case. I long ago learned that infected uteri, with laceration of the cervix, are to be considered as permanently pathological, and in patients at, or over forty years of age, total vaginal extirpation is the proper remedy for relief and future safety.

Mrs. —, aged 35. Referred by former patient. Has had three children, youngest eleven years of age. Severe dysmenorrhea. Ovaries enlarged and very painful to the touch.

OPERATION, NOVEMBER 3, 1888. Appendages on both sides removed through a central incision.

Result. Recovered and restored to perfect health.

Mrs. —, aged 20. Was married at eighteen, aborted one year later. Has severe dysmenorrhea, almost constant pain in the pelvis. A painful mass is felt to the left of the uterus.

OPERATION, NOVEMBER 7, 1888. Short incision, removal of left ovary and tube.

Result. Uneventful recovery from the operation, followed by a continuance of invalidism. Upon a later acquaintance with this case, I discovered that up to the time of her marriage she was in perfect health; that after marriage, her pelvic troubles began almost immediately, followed by a train of symptoms, consisting of dysmenorrhea, sub-acute endometritis, and vaginal

leucorrhea, which are referable to a previous attack of gonorrhea in the husband. I have no doubt at this late period, twelve years later, I would have given proper interpretation to this part of her history, made a total vaginal extirpation, and cured the woman.

April 15, 1889. She returned and I removed the remaining ovary and tube. And a year later she was still complaining of many of her former symptoms.

The importance of gonorrhea in men is immense. A young woman had better marry a poor, but pure man, or remain single, than to marry a gonorrhoeic millionaire.

OVARIOTOMY.

Mrs. —, aged 58. Referred by Dr. Purrington, Indiana, Pa. Multipara. Widow. Menses regular and painless. Tumor diagnosed two years ago as ovarian, by Dr. Purrington.

OPERATION, NOVEMBER 7, 1888. Present, Drs. Purrington, Stewart, Upham of Chicago, the consulting board,* and the resident physician, Dr. Williamson. Patient enormously distended. Central incision, four and one-half inches. Hand introduced, some slight adhesions broken up, cysts emptied, drawn out, pedicle ligated and divided by the Pacquelin cautery. Cavity flushed out with hot water. Wound closed by interrupted silk worm gut sutures. Time, thirty minutes.

Result. Prompt recovery. Patient still living, Nov. 1900.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 24. Referred by former patient. Married two years. Sterile. Dysmenorrhea with convulsions, since

*The Board consisted of Dr. A. M. Pollock, Dr. John P. Sterrett, Dr. Thomas Shaw, Dr. Thomas Mabou, Dr. George Bruce, Dr. W. D. Kearns. To these men, but two of whom are now living, I extend my sincere gratitude for their counsel and support, in the days when pelvic and abdominal surgery was less popular than at the present time.

before marriage and growing worse. Mass felt on both sides of the uterus.

OPERATION, NOVEMBER 13, 1888. Short central incision, removal of appendages on both sides.

Result. Recovered and cured.

Mrs. —, aged 33. Referred by Dr. Rugh, Westmoreland County. Five years ago, then unmarried, consulted me. She had very severe dysmenorrhea, and her ovaries were enlarged and very sensitive to the touch. I advised their removal at that time. A year later she married. She has remained sterile and had a pelvic abscess. She is now an invalid suffering from dysmenorrhea and neurasthenia.

OPERATION, DECEMBER 1, 1888. Appendages removed on both sides.

Result. Recovered. Great improvement followed during the next two years, at the end of which time she was menstruating regularly without inconvenience.

Note. About 4 per cent. of Mr. Lawson Tait's cases continued to menstruate after salpingo-oöphorectomy. Arthur Johnstone has explained that this persistency of menstruation is owing to a failure to divide the nerve supplying the endometrium.

OVARIOTOMY.

Mrs. —, aged 26. Referred by Dr. Knox, McKeesport, Pa. Enjoyed good health until after marriage, since which time she has had three abortions. Has become a permanent invalid and spends most of her time in bed. One year ago she had a pelvic abscess which was evacuated by the rectum. Prior to the formation of this abscess, an unsuccessful attempt had been made to repair a lacerated cervix.

OPERATION, DECEMBER 3, 1888. Central incision, appendages loosened up from adhesions and removed.

Result Recovered, and reported one year later, as much improved. I saw her three years later, apparantly in excellent health.

OÖPHORECTOMY.

Miss —, aged 23. Referred by former patient. A factory girl. Has never menstruated. Every month she experiences all the phenomena of menstruation, excepting the flow. This has continued since her fifteenth year. During the last two or three years, says that at these times her head is so much disturbed that she cannot attend to her duties. Examination A very shallow cul de sac at the introitus constitutes all the vagina she has. Bi-manual examination with the finger in the rectum fails to detect a uterus, but does detect something which feels like an ovary. I suggested an exploratory laparotomy to which she assented.

OPERATION DECEMBER 11, 1888. Present, Dr. Frank McDonald, Dr. W. J. Rugh. Central incision, one inch long was made as close to the pubic symphysis as was safe, admitting the index finger. An abnormal condition was recognized as existing. The incision was now extended to two and one-half inches, and two fingers were introduced into the pelvic cavity. The following was the condition: the uterus was but a rudimentary development, as thick as the little finger, and about one and a quarter inches in length. On the left side a rudimentary broad ligament without tube or ovary existed. On the right side was found a rudimentary broad ligament, a very short tube and an unusually large ovary. The latter was removed. Wound closed.

Result. Prompt recovery, permanent relief from all former symptoms.

Note. November 23, 1900. At the present day we have come to removing the uterus and leaving the ovaries behind,

when healthy. The object being to save the patient from the unpleasant symptoms of an artificial menopause. Thus far the weight of testimony is in favor of the procedure. This case in which Nature almost simulated the work of a surgeon, the ovary was a source of mischief, and the patient was cured by its removal. In operating I have never left the ovaries behind in a hysterectomy without thinking of this case and wondering if they will become a source of similar suffering. Up to this date, however, I have never seen any bad result in leaving behind in the pelvis, a healthy ovary, when doing a hysterectomy.

ABDOMINAL SECTION FOR PELVIC ABSCESS.

Mrs. —, aged 46. XII para. A large collection of pus has for a long time been accumulating between the layers of the right broad ligament. The dome of the abscess occupies the lower abdomen above Poupart's ligament. The patient is septic and has severe pain in the region of the liver. Present, Drs. McCurdy and Baldwin, of Columbus.

OPERATION, FEBRUARY 1, 1889. A short median incision was made exposing the interior of the abdomen and the abscess sac. The latter was carefully stitched to the peritoneum of the abdominal wound, and the sac opened. It was estimated that three quarts of pus were removed from the sac, which was thoroughly irrigated. A drain tube was introduced into the sac, through which the sac was subsequently irrigated.

Result Two weeks later the tube which had been shortened from time to time was removed, leaving a small sinus, discharging serum. Three months later this patient died from metastatic abscess in the liver.

LAPAROTOMY.

Mrs. —, aged 46. Referred by Dr. Bell, Butler, Pa. Has been married twelve years, two children, youngest nine

years old. Was in good health until one year ago, when it was discovered that she was developing a tumor in the lower abdomen. Has not menstruated for four months. Tumor growing rapidly.

OPERATION, FEBRUARY 18, 1889. A long incision, four inches, revealed a multilocular ovarian cyst, arising from the left ovary. This was removed without much difficulty. A small pediculated fibroid was removed from the corresponding side of the uterus. On her right side a tumor was growing upwards from her right pelvis, it was firmly fixed in the pelvis, and to the right pelvic wall, or more properly speaking, to the inner surface of the ileum. It contained fluid and was of a dark blue color. I stopped the operation and announced to Dr. Bell and my assistant, Dr. Williamson, that I believed the tumor to be malignant, and that an attempt at its removal would be fatal to the patient. The multilocular ovarian cyst which had been removed with its contents, weighed six or eight pounds. The wound was closed without further interference.

Result. A year later the patient by letter through Dr. Bell, requested a second operation, for the removal of the tumor which I had left behind. I declined to accede to the request. She was taken to Phila., Pa., and placed in charge of Dr. Wm. Goodell, who attempted the removal of the tumor. She died a few hours after operation.

OVARIOTOMY.

Miss —, aged 50. Referred by Dr. Sloan, Bakerstown, Pa. Diagnosis made by Dr. Sloan, multilocular ovarian cyst. Patient is very much distended, but in good condition.

OPERATION, FEBRUARY 19, 1889. Central incision, reduction and delivery of cysts, ligation, and division of pedicle with Pacquelin cautery. Cavity irrigated and sponged dry. Wound

closed by interrupted silk worm gut sutures. Dressed with iodoform.

Result. Good recovery.

LAPAROTOMY FOR SUPPOSED RUPTURED TUBAL PREGNANCY.

Mrs. —, aged 32. Was married at twenty-five years of age. For several years she had suffered from dysmenorrhea. Up to January of the present year (1889), she had always been regular. Within sixty days of that time it is supposed, after careful inquiry, that she became pregnant. The exact date of her conception could not be fixed, nor was her pregnancy at this date suspected.

On March 25th she appeared at the office of her family physician, Dr. Beatty, of Allegheny, complaining of abdominal and pelvic distress, characterized by pain. Up to this date, nor subsequently, she did not miss a menstrual period. She continued to call at his office until the 31st of March, after which date she was confined to bed for one week with paroxysms of pain in the left breast and side. Some of the attacks were so severe as to resemble angina pectoris. They were controlled by means of large doses of morphine. During this period of seven days there was no uterine tenesmus, but considerable complaint of pain in the left groin.

On the sixth day of her confinement to bed, a flow of blood from the vagina began. On the following day, the 7th of April, Dr. Beatty made a vaginal examination, and failed to note anything abnormal, excepting a fullness to the left of the uterus and some tenderness on pressure. From the fourteenth to the twenty-first the patient improved, left her bed, and resumed her household duties. On the twenty-sixth she was again attacked and went to bed.

Dr. J. H. Williamson was now called in consultation with Dr. Beatty. The patient stated that all the attacks from which

she had suffered were ushered in by pain beginning in the left groin, but were masked by excruciating pain in the cardiac region. They found upon examination under ether, that there was some enlargement of the abdomen, that there was a mass in the left side of the pelvis, and that it was adherent to the uterus; also, that blood was flowing from the uterus. The mass was hard. A sound was introduced into the uterus, the cavity of which was found to be five inches in depth and empty. The hand resting on the lower abdomen distinctly traced an ill-defined mass bounded by the uterus on the patient's right, reaching out and filling the left side of the pelvis and a good portion of the inguinal region. Before the ether was administered, slight pressure with the sound at the fundus of the uterus produced unbearable pain. This fact led to the etherization. It was difficult to arrive at a diagnosis, but it was concluded that the physical signs, coupled with a high temperature, pointed to the existence of a fibroid involved in an inflammatory process, or that an extra-uterine pregnancy existed, and that an inflammation was in progress. During the following nine days she was confined to bed; her pain was controlled by means of hypodermic injections of morphia. During all this time her temperature range was above 100.

At this date, April 5th, she got out of bed for the purpose of having a stool; while in the act she experienced the sensation of something having given way in the lower part of her abdomen. She immediately got back into bed and lay doubled up with pain, which was soon afterward subdued by a hypodermic of one quarter grain of morphia, given by Dr. Beatty. She did not complain of faintness, and there was no history of internal hemorrhage. During the night of the fifth and the following day the surface of the abdomen began to present the following appearance: An enlargement extended from above the symphysis, over the fundus of the uterus, to the superior spinous process of the ileum on the left side. It was described as a welt as

thick as a man's arm, and led to a consultation of the attending physicians the same night. They at once concluded that they were dealing with a case of extra-uterine pregnancy, with a ruptured sac.

The following morning, April 7th, at 9.30, I saw her in consultation with Drs. Beatty and Williamson. She was lying in bed, her legs drawn up, her face pinched, pulse 120, temperature 103, her abdomen very much swollen, tender on pressure. A digital examination revealed a mass in the pelvis in the location already referred to. I concurred in the diagnosis of ruptured tubal pregnancy already established, and also in the necessity of opening her abdomen. Her home was near my private hospital, to which she was carefully conveyed, and with the least possible amount of strain, prepared for the operation.

Four hours after the consultation in the morning, in the presence of Drs. Beatty and Matson, Dr. Williamson assisting, I proceeded to operate. A three inch incision laid bare the abdominal peritoneum, which was found closely adherent to the fundus of the uterus below, and to the peritoneum covering several folds of the intestine above. The incision was extended to the umbilicus. The peritoneum was incised, and the peritoneal layer was then separated by means of the fingers from that covering the intestines and the fundus of the uterus. Immediately a large quantity of decomposed blood and clots, the latter looking like pieces of macerated leather, poured out over the wound. On the surface of this flow was a well-defined streak of pus. Two or three sponges were passed down to the left of the uterus, removing a considerable amount of blood and clots. The left hand was now passed into the left side of the pelvis, and the left ovary and tube were found unruptured. A similar exploration was then made to the right of the uterus, and that ovary and tube were found unruptured. Further exploration on the left side led to the discovery of a tear or rupture in the wall of the uterus behind its upper left angle.

Through this two fingers passed readily into a cavity containing some clots. These were scooped out with the fingers. The walls of the cavity were so soft that they could be broken down with the thumb and finger. I now passed a uterine sound through the vagina into the cavity of the uterus, and holding it in my right hand, I passed two fingers of my left hand through the abdominal wound into the cavity in the uterine wall. Careful and prolonged investigation enabled me to determine positively that there was no connection between the cavity of the uterus, and the cavity into which my fingers were inserted. The entire cavity of the belly presented the appearance of a far advanced and violent peritonitis. The loops of adhered intestine looked like sections of raw beef.

The temperature of the patient when she went on the table was 104. The contents of her pelvic cavity were decomposed, and I realized that we were making an ante-mortem examination. Removing a few bits of the uterine tissue from the edge of the rupture and the corresponding Fallopian tube, I washed out the abdominal cavity and inserted a drainage tube. The patient became conscious in less than thirty minutes after she was put to bed; thirteen hours after she died, never having rallied from the operation. — No post-mortem was made.

Mrs. —, aged 26. Referred by Dr. Sykes, Pittsburg, Pa. Married eighteen months ago, no children. General health was good before marriage. Present trouble began just after. The abdomen has increased in size with great rapidity, contains large masses floating in ascitic fluid. Diagnosis, cancer of the omentum.

OPERATION, APRIL 11, 1889. Assisted by Dr. Williamson. Free, central incision, evacuation of a large quantity of ascitic fluid. The entire omentum filled with large masses of colloid, was removed.

Result. Recovered. This patient was still in excellent condition in the Fall of 1890.

May 20, 1901. Died of cancer of the peritoneum three years after operation.

OVARIOTOMY.

Mrs. —, aged 34. Referred by Dr. Armstrong, Leechburg, Pa. Multipara. Abdominal tumor discovered recently. Diagnosis, ovarian cyst.

OPERATION, APRIL 7, 1889. Central incision, four inches in length, tumor largely adherent from recent inflammation. The adhesions were broken up by the hand, the cyst was tapped and delivered. Contents of the cyst contained much broken down blood. Pedicle twisted. Cavity irrigated with hot water. Wound closed as usual.

Result. Uneventful recovery.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 33. Referred by Dr. Klingensmith, Blairsville, Pa. Multipara. Married fifteen years, eight children and three miscarriages. Last confinement three years ago. Right mammary gland removed four years ago. Between three and four years ago, a pelvic abscess discharged through the vagina. Has menorrhagia, neurasthenia, a chronic cystitis; and a mass is felt, per vaginam, on both sides of the uterus.

OPERATION, APRIL 27, 1889. Central incision. Adherent appendages removed from both sides.

Result. Recovered from the operation, but was still an invalid two years later, but much relieved by the operation.

OVARIOTOMY.

Mrs. —, aged 25. Referred by Dr. Armstrong, Apollo, Pa. Multipara. Twins at first confinement. General health

good. Abdomen has been enlarging for two years. Irregular menstruation for last six months.

OPERATION, MAY 9, 1889. Short central incision, very large cyst of the broad ligament, tapped and drawn through the wound. Both ovaries found in chronic cystic degeneration. Both ovaries and cyst removed.

Result. Uneventful recovery.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 27. Referred by Dr. Gladden, Homestead, Pa. Has been an invalid for nine years. Dysmenorrhea, sharp ante flexion of the uterus, recurrent pelvic peritonitis, ovaries and tubes adherent.

OPERATION, MAY 5, 1889. Short incision. Removal of appendages on both sides. Pedicles divided by Pacquelin cautery.

Result. Recovered with restoration to health.

MYOMECTOMY.

Mrs. —. Referred by Dr. Montgomery, Tarentum, Pa. Tumor was discovered two years ago, growth progressive, pain, menorrhagia and metrorrhagia. The tumor about the size of a child's head.

OPERATION, MAY 28, 1889. Central incision, extending above the umbilicus. Tumor and uterus turned out. Uterus surrounded by temporary rubber ligature. The tumor was devoid of pedicle, springing from the fundus uteri, with a base about the size of a silver dollar. The tumor was cut off close to the uterus. A V-shaped piece was taken out of the uterine surface, the edges drawn together with interrupted silk sutures. Anterior fixation of the uterus was then made, the two lower silk worm gut sutures in the abdominal wound, passing through

the wound in the uterus. Thus the wound in the fundus was further protected by being brought in apposition with the parietal peritoneum. Rubber ligature removed, wound closed.

Result. Recovered. Discharged a month later.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 29. Referred by Dr. O'Brien. Multipara. Subject of gonorrheal infection followed by chronic endometritis, salpingitis, ovaritis and pelvic peritonitis. Exudate on both sides of the uterus.

OPERATION, JUNE 12, 1889. Short central incision. Ovaries and tubes matted by adhesions, separated and removed. Pedicles burnt off with Pacqueulin cautery.

Result. Recovered.

Mrs. —, aged 30. Referred by former patient. Suffers from a persistent pelvic pain, for which she has had much treatment without relief. Dysmenorrhea, dyspareunia, general health failing. Bi-manual examination fails to detect any trouble in the ovaries and tubes.

OPERATION, JUNE 22, 1889. Small central incision, ovaries and tubes non-adherent, the former smaller than normal, and of unusual density. Ovaries and tubes on both sides removed.

Result. Patient recovered with entire relief of former trouble, and complete restoration to health.

CHOLECYSTOTOMY.

Mrs. —, aged 31. Referred by Dr. Hammett, of Homestead, and Dr. Cook, of McDonald, Pa. History of repeated attacks of biliary colic, gall bladder perceptibly enlarged.

OPERATION, JULY 1, 1889. Incision two and one-half inches in length, starting at the tip of the cartilage of the tenth rib, and extending obliquely downwards. Distended gall-bladder

free from adhesions, drawn into the wound, incised at the summit. Small quantity of clear liquid, not yellow, was evacuated. Two large stones and one small one, were readily turned out with a scoop. A fourth stone, unusually large, was found impacted in the cystic duct. Efforts to withdraw it with the forceps and also an effort to break it down with a sharp pointed probe, and to crush it with the finger, failed. With a pair of broad bladed clamp forceps, placed across the duct, it was crushed, and with a small scoop and irrigation through the wound in the gall-bladder, the fragments were removed. The gall bladder was stitched in the wound, a rubber drainage tube inserted and the wound closed, leaving the tube protuding.

Result. Recovery.

Note.— In stitching the gall bladder to the abdominal wound, not having before had any experience with the operation, never having seen it performed, I united the incision in the gall bladder, not only to the margins of the wound, but to the skin also. Consequently a fistulous opening at the site of the tube persisted for a couple of months, but closed without special treatment.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 29. Referred by Dr. J. Q. Robinson. Has been married nine years, sterile, sharp attacks of recurrent pelvic peritonitis have broken her health. Great sufferer from neuralgia.

OPERATION, JULY 8, 1889. Short central incision, left ovary and tube buried in adhesions of unusual resistance, right ovary and tube adherent. Ovaries and tubes removed from both sides.

Result. Recovered with subsequent complete restoration to health a year later.

Mrs. —, aged 28. Referred by Dr. Gladden, Homestead, Pa. Has been married three years, sterile. Menstruated at thir-

teen. Always had considerable pain, but health was good in other respects. Two weeks after marriage developed a vaginitis, accompanied by a yellow discharge and dysuria.

OPERATION, SEPTEMBER 10, 1889. Short central incision. Appendages adherent on both sides, separated and removed. Wound closed.

Result. Patient recovered.

Note. Up to this date I had made very frequent use of the drainage tube, which I had learned from observations made at the operations of Drs. Thomas Keith and Lawson Tait. But recently I had a case in which I thought a drainage tube was necessary, and in carrying it in my fingers from the bowl of water in which it was resting, to the abdominal wound, I let it slip out of my grasp, and it fell on the floor and was broken. Not having another, I closed the wound without inserting any. The case recovered more smoothly than did many others in whom I used a tube. After this case the use of the drainage tube in my cases has been growing more infrequent. Accidents are not always fraught with evil.

REMOVAL OF OVARIES ON ACCOUNT OF FIBROID TUMOR.

Mrs. —, aged 41. Referred by Dr. J. P. McCord, Pittsburg, Pa. Primipara. Menorrhagia and metrorrhagia for the past three years. Uterus contains an interstitial fibroid, the entire mass about the size of a cocoanut.

OPERATION, OCTOBER 6, 1889. Short incision, removal of both ovaries and as much of the tubes as possible, on both sides.

Result. Recovery from the operation. On May 24, following, I found the tumor reduced fully one-half, and at the end of two years, Dr. McCord reported it as apparently all gone.

Note. At the present time I would have made a hysterectomy in this case.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 29. Referred by Dr. Ackermann, Wheeling, West Va. Married eleven years, sterile. Pus tube on the left side.

OPERATION, OCTOBER 19, 1889. Short incision, subsequently enlarged a little. Pus tube and ovary on the left side removed. Right ovary and tube found adherent and removed.

Result. Recovered.

Note. Following the example of Mr. Tait, I have adhered to very short incisions, and all the manipulations in the pelvis are made without the aid of vision. In such cases as this one, the fingers seek for a line corresponding to the plane of cleavage which always exists more or less firm between the adherent organs. This plane of cleavage is followed by the finger tips and the released organs are drawn up between two fingers into the wound. In cases where the infundibular ligament is short, I have found something gained by efforts at tearing it across to a limited extent, below the ovary.

OVARIOTOMY.

Mrs. —, aged 28. Referred by Dr. Sprowl, Canonsburg, Pa. Married ten years. Primipara. Diagnosis, multilocular ovarian cyst.

OPERATION, NOVEMBER 2, 1889. Central incision, cysts emptied and delivered, pedicle ligated and burnt off with the Pacquelin cautery. Cavity irrigated with hot water, wound closed with interrupted silk worm gut sutures, iodoform and boracic dressing. This tumor contained dermoid contents.

Result. Uneventful recovery.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 36. Referred by Dr. Armstrong, Apollo, Pa. Married three and one-half years ago, sterile. Diagnosis, a fibro-myoma. General health poor.

OPERATION, NOVEMBER 5, 1889. Uterus and appendages constricted with Kœberle's serre-neud below two cross pins, the uterus and tumor having previously been drawn out of the abdominal cavity, through a very long incision. The intestines were protected by towels wrung out of hot water, covering the incision and surrounding the base of the mass. With a large bistoury the tumor was bisected and its halves shelled out. The uterus and its appendages were cut off an inch above the wire of the serre-neud. The stump was mummified. The peritoneum on the margins of the incision were drawn closely around the stump below the wire and secured by suture. The cavity was irrigated with hot water, dried out with sponges, wound closed by interrupted suture, iodoform and boracic acid dressing. The tumor and portion of the uterus cut away weighed nine pounds. The pedicle separated on the eighteenth day.

Result. Excellent recovery.

May 20, 1901. Joseph Price still uses Kœberle's serre-neud. He has had the best recorded results in this country. Bantock of London, has a record for England equally in favor of the method.

REMOVAL OF THE OVARIES FOR FIBROID TUMOR.

Miss —, Referred by former patient. Patient has multiple fibroids, accompanied by severe hemorrhages.

OPERATION, NOVEMBER 28, 1889. Tolerable free central incision. Uterus and tumors fill the pelvis. Working space small. The ovaries and part of the tubes were removed with difficulty, and it was necessary to leave two pairs of compression forceps protruding from the lower angle of the abdominal wound, which was closed down to the forceps, and the dressing applied around them. The forceps were removed a day or two later.

Result. Abdominal wound suppurated, recovery protracted, but good.

Note. Three years later all trace of the tumors had disappeared.

OVARIOTOMY.

Mrs. —, aged 42 Referee unknown. Multipara. Abdomen contains a large multilocular tumor. Has the history of a severe attack of peritonitis some months ago. Health badly broken.

OPERATION, DECEMBER 19, 1889. A four and one-half inch incision in the central line disclosed a large multilocular cyst, the omentum adherent to its anterior surface, and later extensive intestinal adhesions were encountered. The omentum having been separated and its vessels ligated, and ragged edges cut away, the largest cyst was tapped and drawn out, some intestinal adhesions were separated, and small vessels on their surfaces ligated. After further reduction of the tumor by evacuation, it was delivered. The pedicle was ligated with silk and burnt off with the Pacquelin cautery. The cavity was irrigated and dried out, wound closed with interrupted silk worm gut sutures.

Result. The operation had been prolonged forty minutes. There was an unusual amount of shock, the patient dying forty-eight hours later.

Note. The tumor was a dermoid, containing hair, cartilage sebaceous matter and one compartment was suppurating. My impression at this late date is that the death was due to shock and sepsis. Our present method of earlier evacuation of the intestine by high saline and glycerine enemata might possibly have turned the scale in her favor.

Mrs. —, aged 56. Referred by Dr. Waples, Dubuque, Iowa. Nullipara. Diagnosis of ovarian cyst by Dr. Waples.

OPERATION, DECEMBER 23, 1889. Dr. Waples present. Central incision. Cyst separated from numerous adhesions,

evacuated, delivered, pedicle ligatured, cavity irrigated, dried out, wound closed. Two weeks later free fluid was detected in Douglass' cul de sac, which was drawn off with aspirator needle passed through the vaginal vault.

Result. Recovery.

Note. Patient died a year later from a recurrence of the disease in the pelvis. My recollection is that Mr. Lawson Tait told me in 1882 or 1883, that about 10 per cent. of his cases of ovarian cystomata were proven by recurrence to be malignant. At this date, November 24, 1900, I am able to say that the proportion of recurrences as given by Mr. Tait for his cases in England, is too high for Pittsburg and surrounding country. I think that 6 per cent. would be about correct.

Mrs. —, aged 34. Referred by Dr. O'Brien, Hazlewood, Pa. Multipara. Tumor at first supposed to be a pregnancy, with delayed labor. Differential diagnosis made by Dr. O'Brien.

OPERATION, FEBRUARY 3, 1890. Central incision, separation of slight adhesions, delivery of the cyst, pedicle ligated and burnt off with the Pacquelin cautery, pelvis irrigated, sponged dry. Wound closed with interrupted silk worm gut sutures. Left ovary found apparently healthy and left.

Result. Recovered.

Note. The question of leaving the second ovary, in consideration of the development of future cystic degeneration, is one which can never be debated, when the second ovary is found apparently healthy. Such an ovary should always be left without reference to what the future history of the patient may be. Mrs. —, returned home and enjoyed excellent health for a time, but a little more than twenty months later, she returned with a large multilocular ovarian cyst, which subsequently weighed twelve pounds, and growing from the left ovary, which had been left at the prior operation.

OPERATION, SEPTEMBER 29, 1891. Present, Drs. Williamson, Stone and O'Brien. A central incision in line of former cicatrix, cyst tapped, freed from some adhesions, delivered, pedicle ligated and divided, wound closed. Time occupied, twenty minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 22. Referred by —. A young woman of abnormal nervous development. Has been a great student, menses always irregular, and finally they ceased entirely. Had mental aberration almost constantly during the last two years. Before the cessation of the menses a few months ago, her mental condition was much worse, especially at the time of her periods. Vaginal examination reveals diseased appendages on both sides. At the time she is suffering from an attack of acute mania, and is confined in a straight-jacket.

OPERATION, FEBRUARY 13, 1890. Assisted by the resident physician, Dr. Williamson, short incision, removal of the appendages on both sides, wound closed by three interrupted silk worm gut sutures.

Result. Within forty-eight hours the patient's mental condition began to improve, and at the end of two weeks there was not a trace of her former maniacal condition. She returned home within a month, and remained well until the following December, a period of about ten months, when she was stricken by an attack of typhoid fever, through which she was attended by Dr. Williamson, at her home. The following note made by Dr. Williamson is appended:

Note. "January 1891. This patient remained well, gained flesh, etc., until December 1890, when she passed through an

attack of typhoid fever, with high temperature, etc. In the third week the patient became delirious, and after subsidence of the fever, continued to be maniacal. Diagnosis, recurrent insanity, induced by typhoid."

The ovaries and tubes in this case presented the following characteristics, the result of inflammation: the tubes were thickened and very much congested, the ovaries somewhat larger than normal, and undergoing cystic degeneration. The uterus was preternaturally small. What was the cause of this condition of the appendages? The patient was absolutely pure, and had no history of prolonged uterine treatment, through which possible infection may have occurred. I am disposed to believe that the disease had its origin in an attack of scarlet fever in childhood, and in accordance with the history of her menstrual life, was progressive from that period.

Mrs. —, aged 37. Referred by former patient in Chicago, the home of the patient. Married twenty-two years. Sterile. Severe dysmenorrhea and neuralgia. Has been treated locally ad nauseum. Disease of the appendages easily made out.

OPERATION, FEBRUARY 25, 1890. Central incision. Lower end of omentum found adherent to the fundus of the uterus, and pelvic contents. Omentum separated, its vessels ligated, and small portion beyond the ligatures cut away. A cyst is found filling each lateral half of the pelvis, both adherent at their bases to the floor of the pelvis. One is shelled out following the line of cleavage with the fingers, and as it is drawn into the incision, ruptures. The pedicle is ligated with silk and burnt off. The other cyst, somewhat larger, is now punctured, separated from its adhesions and drawn out. Pedicle ligated and burnt off. Both cysts were ovarian. Cavity irrigated with simple boiled water, dried out, wound closed.

Result. Prompt recovery, had one stitch hole abscess. Patient sent to Florida in the fourth week after her operation.

SALPINGO-OÖPHORECTOMY FOR FIBROID TUMOR.

Miss —, aged 21. Referred by former patient. Menorrhagia and metrorrhagia. Patient very anæmic. Examination reveals a fibroid tumor in the uterus.

OPERATION, FEBRUARY 27, 1890. Central incision, diagnosis perfected, a fibroid as large as a lemon, interstitial, imbedded in the fundus uteri. Appendages removed on both sides.

Result. Prompt recovery. Fibroid had entirely disappeared two years latter. Excellent health was re-established within the first year. At this writing, ten years later the patient remains in excellent health.

Note. At this date, I would have made a myemectomy in this case. Myomectomy in similar cases is now the rule.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 41. Referred by Dr. Pershing. An old and confirmed invalid, very much emaciated, a morphia habitue. Old standing disease of the uterine appendages, with laceration of the cervix and introitus vagina, which had been recently repaired. The patient is profoundly neurotic and confined to bed most of the time.

OPERATION, MARCH 10, 1890. Central incision, short, ovaries and tubes found adherent, apparently completely imbedded. After a long and persistent effort they were completely shelled out and removed on both sides. Tolerably free bleeding from the bottom of the pelvis. Pelvis packed, packing removed, cavity irrigated, wound closed.

Result. Patient recovered.

Note. The wound was closed with interrupted silk worm gut sutures. When the time came to remove the sutures, the patient was so intensely nervous, that it was accomplished by Dr. Williamson with great difficulty, and the lowest stitch in the wound had been cut close to the knot, and was completely imbedded and missed. Subsequently some suppuration occurred around the stitch, and it was discharged five or six months later. The patient and her friends made no end of complaint of what they called "carelessness." Later the health of this patient was reported as greatly improved.

SUPRA-VAGINAL HYSTERECTOMY, FOR MULTIPLE FIBROIDS.

Mrs. —, aged 30. Referred by former patient. Diagnosis of fibroids made one year ago. Her periods are free but not painful. Has no metrorrhagia. Has been married seven years, has one child, three or four years old. Has a goitre, also slight mental disturbance. The mass in the abdomen reaches almost to the umbilicus.

OPERATION, MARCH 15, 1890. Free central incision. Uterus and tumors drawn through the wound. Base of uterus surrounded by Koeberle's serre-neud, long transverse pins passed above the constricting wire. Whole mass cut away by V-shaped incision short distance above the pins. Stump above the pins mummified, sponges removed from the pelvis. Peritoneum of the stump carefully surrounded with the peritoneum along adjacent borders of the incision. Wound closed with interrupted silk worm gut sutures.

Result. Patient recovered. Had a persistent but very small fistula for some time afterwards, probably due to a retained suture. Although the fistula closed and the suture was never seen.

Note. The uterus contained eleven fibroid tumors. In this case, at the present date, a supra-vaginal hysterectomy

would have been as proper as ten years ago, but I would have done it now either by the method of Baer, Baldy, Kelly or Davenport.

OVARIOTOMY.

Mrs. —, aged 51. Referred by Dr. Benham, Pittsburg, Pa. Multipara. Abdomen has been enlarging for five or six years. Present condition, much distress in breathing. Persistent constipation, dyspepsia, insomnia and pain. Patient very large.

OPERATION, MARCH 23, 1890. Free incision. Omentum adherent to front of tumor. Considerable free fluid in the abdomen. Tumor found adherent to both right and left abdominal parieties. Omentum detached and vessels ligated, portion of omentum cut away. Lateral adhesions separated by the edge of the hand passed into the abdominal cavity. The cysts tapped, much disorganized, semi-solid matter in base of the cysts. Collapsed cysts and semi-solid cysts delivered. The pedicle from the left side was short and broad, it was ligated with boiled silk ligature and burnt off. Cavity flushed with hot water, dried out, wound closed with interrupted silk worm gut sutures.

Result. Patient recovered within a month and again acquired good health.

Note. Three years and one-half after this operation, the patient presented herself again, with extensive cancer of the peritoneum, mesenteric glands and liver both enlarged. She died later of cancer.

Miss —, aged 15. Referred by Dr. Blatchley. Diagnosis, multilocular ovarian cyst, which has been developing for several years. Her abdomen is enormously distended, while she is much emaciated. She is the youngest subject I have hitherto met with, having a multilocular ovarian cyst.

OPERATION, MARCH 22, 1890. Central incision, slight adhesions broken up with the hand, cysts tapped and pedicle divided with Pacquelin cautery.

Result. Smooth recovery.

Note. November 26, 1900, patient living in fine health, married and has children.

SUPRA-VAGINAL HYSTERECTOMY FOR FIBROIDS.

Mrs. —, aged 40. Referred by Dr. Kirker, Allegheny, Pa. Multipara. Growth of tumor dates from about her thirty-fifth year, an age at which the fibro-myoma generally makes its appearance. She has severe menorrhagia and metrorrhagia. Tumor reaches to the umbilicus.

OPERATION, APRIL 1, 1890. Long central incision, reaching to the umbilicus, exploration with the hand, extension of the incision upwards. Tumor and uterus brought through the wound, sponges passed to the bottom of the pelvis, behind the tumor, incision filled with sponges. Kœberle's serre-neud adjusted below two cross pins, at the base of the uterus. Tumor bisected with heavy bistoury, its halves shelled out of the capsule, uterine flaps cut away an inch above the pins. Stump mummified. Peritoneum in the incision stitched to the stump below the wire. Sponges removed. Closure of the abdominal wound with interrupted silk worm gut suture. Iodoform dressing.

Result. Recovery.

SALPINGO OÖPHORECTOMY.

Mrs. —, aged 44. Referred by Dr. Johnson. Patient has taught school twenty years. A year ago had an attack of pelvic peritonitis. A mass is felt in the pelvis to the right of the uterus.

OPERATION, APRIL 9, 1890. Short central incision, removal of appendages on both sides of uterus. Right ovary as large as a hen's egg, cystic and soft. Operation completed in nine minutes.

Result. Recovered.

Note. The patient complained of a continuance of local discomfort and general poor health for a year after the operation. Improvement then began, resulting in the establishment of good health, which still continues ten years later. Many of these cases of salpingo-oöphorectomy, are two and three years recovering their health after successful operations, and I have learned to tell the patient and her friends, in all such operations not to expect the best results until at least two years have passed by.

Miss —, aged 27. Referred by former patient. Married seven years. Nullipara. Is invalided for about two weeks after each menstrual period. Bi-manual examination reveals ovaritis and salpingitis, long existent, on both sides.

OPERATION, APRIL 21, 1890. Central incision. Ovaries and tubes on both sides removed with great difficulty. The adhesions were very dense and old. Irrigation of cavity. Closure of abdominal wound as usual.

Result. Recovered, convalescence slow, but satisfactory.

MYOMECTOMY FOR LARGE FIBRO CYST.

Mrs. —, aged 60. Referred by Dr. Johnson, Sewickley, Pa. Tumor has been growing for many years, has been frequently tapped, after which high temperatures have prevailed. The abdomen is very large, temperature above normal.

OPERATION, MAY 3, 1890. Free central incision, adhesions broken up with the hand. Several cysts tapped, one contained

a quart of pus. The cysts delivered terminated in a broad short and thick pedicle, which was found springing from the fundus of the uterus, and having no connection with the ovaries. Baker-Brown's clamp was applied, and the pedicle burnt off with the hot iron. The portion of the pedicle caught in the clamp being well cooked. The operation was performed at her home in the country. Careful toilet of the peritoneum was made, the cavity being washed out with hot water, the wound was closed as usual, and an experienced nurse was left with the case. Dr. Johnson conducted the after treatment.

Result. Recovered.

Note. The patient is still living, and has recently been operated upon for cataract.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 42. Referred by —. Patient has very large fibro-myoma, suffers but little pain, but great inconvenience from size of the tumor. The tumor when removed weighed ten pounds.

OPERATION, MAY 5, 1890. Long central incision and delivery of the tumor. Broad ligament on each side including very large veins, was very firmly ligated, and divided above the ligatures with the scissors. Clamp forceps, securing against bleeding from the uterus, were placed astride the uterine sides of the severed ligaments. The ligatured segments were pushed down toward the cervix on both sides, and including the neck of the uterus, were surrounded by the wire of Kœberle's serre-neu., above which two long pins were passed transversely. Tumor bisected and shelled out, the uterus was then cut away an inch above the wire. The ligatures on the large broad ligaments including the enormous veins, lay above the wire and pins on a level with the top of the stump. Thus it was hoped to attain double security. The pedicle was very broad and

thick, a considerable quantity of it above the pins was trimmed away and the balance of it was mummified by cooking with the Pacquelin cautery. Wound closed by interrupted silk worm gut suture. Put to bed in good condition. Dr. Joseph Taber Johnson, Washington, D. C., present at the operation.

After the patient was put to bed and Dr. Johnson and I were leaving the house together, I said to him that I was afraid of that pedicle that it was so thick and short, that I was apprehensive of the security of it. He assured me that he thought it was all right.

Result. About thirty-two hours after the operation, the nurse upon going to use the catheter, discovered that hemorrhage was going on, as the bandage was wet, and there was some blood in the bed. When I reached the patient her pulse was 150, and she had bled enormously. The bleeding was venous and due to the giving away of the wall of a large vein surrounded by the wire. She died, collapsed from hemorrhage on the third day.

Note. Now that the use of Kœberle's serre-neud has passed away, comment on its use seems unnecessary. But the application of the wire of Kœberle's serre-neud to veins as thick as the base of your little finger, is dangerous, and I have never made such an application of the wire since. Had a ligature composed of a piece of rubber tubing been used, instead of the wire, I believe the patient would have recovered, or at least she would have escaped secondary hemorrhage.

LAPAROTOMY FOR SUPPOSED PERI-TYPHLITIC ABSCESS.

Mrs. —, aged 24. Referred by Dr. Wallace, East Brady, Pa. The patient has had severe and prolonged pain in the right iliac region, with inflammatory symptoms. There is dullness on percussion above Poupart's ligament, extending and including a point over the root of the appendix. The

general condition of the patient is fairly good. In consultation with Dr. Wallace we decided to cut into what we presumed was an abscess, probably a suppurating appendicitis.

OPERATION, MAY 25, 1890. An incision extending from a short distance above McBurney's point, was carried directly downward a distance of two and one half inches, and sufficiently deep to open the sac. A large quantity of pus flowed through the incision. The sac was washed out, the appendix was not found, and a drain tube was left in the lower angle of the wound.

Result. The subsequent history of the case proved it to be one of psoas abscess, dependent upon tuberculous disease of a vertebræ. Possibly had the operation been longer delayed the pus would have pointed below Poupart's ligament to the outer side of the spine of the pubis. Particles of necrosed bone were subsequently passed through the wound.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 30. Referred by former patient. Married at nineteen. Confined at twenty-one. Confinement followed by puerperal peritonitis, since which period she has been in bad health, and sterile. Examination reveals an enlargement and painful condition of the ovaries and tubes.

OPERATION, MAY 29, 1890. Short central incision, ovaries and tubes found adherent, with small amount of ascitic fluid in the pelvis. All adhesions separated by the fingers. Ovaries and tubes removed. Assisted by Dr. Williamson, resident physician.

Result. Recovered.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 53. Referred by and seen with Dr. Klingensmith. This patient has been running an abnormal pulse

and temperature for several months. A cyst, distinctly fluctuating, occupies the lower abdomen, rising high above the umbilicus.

OPERATION, JUNE 2, 1890. A short incision in the median line entered the cyst, which was adherent to the front wall of the abdomen as high as the umbilicus. Detaching it from the abdominal wall at one side of the incision I was able to make out further extensive adhesions. The sac was a mono-cyst and the contents unlike ovarian fluid. I concluded to try to cure the patient by safer means than removal of the sac, consequently I introduced a large glass drain tube into the cyst and closed the wound around it, taking care to close up the opening made between the cyst and the wall of the abdomen to admit the finger for exploration.

Result. As soon as sufficient healing around the tube had taken place, Dr. Klingensmith irrigated the sac daily with Thiersch's solution. Eight days later the patient's temperature was reported normal, with but slight discharge from the tube. Red wash consisting of water colored deeply with tincture of iodine, was substituted for the Thiersch's solution, and continued until the patient was entirely cured. As the case progressed a rubber tube was substituted for the glass one.

REMOVAL OF THE APPENDAGES FOR FIBROID.

Mrs. —, aged 23. Referred by Dr. McCready, Allegheny, Pa. General health fairly good, menstruated at fourteen. Was regular and without dysmenorrhea until within the last year, during which time she has had dysmenorrhea, accompanied by profuse menorrhagia. Six months ago Dr. McCready discovered an interstitial fibroid in the fundus of the uterus.

OPERATION, JUNE 7, 1890. The ovaries and tubes were found much enlarged, the former cystic. There were no adhesions. The ovaries and tubes were removed.

Result. Recovered from the operation. Subsequent history of the case entirely satisfactory, the tumor disappearing.

SALPINGO-OÖPHORECTOMY FOR MULTIPLE FIBROIDS.

Mrs. —, aged 48. Referred by —. Multipara. Last labor probably fifteen or sixteen years previous to this time. For several years past has had a great deal of back-ache, neuralgia, some neurasthenia, some menorrhagia and metrorrhagia. Has been treated for about everything else than the right thing. The patient returned from a sojourn in the South recently, and the journey was followed by a severe hemorrhage, the medical attendant in the case said, "due to a miscarriage." The patient did not concur in this opinion, and two days later she was placed under my care. Upon examination I diagnosed multiple fibroids, and suggested removal of the uterine appendages.

OPERATION, JUNE 10, 1890. Doubt was thrown upon my diagnosis by the recent medical attendant, influencing friends of the patient. A consultation was suggested and accepted with the proviso that the consultant be brought from another city, and be a man of national reputation. Dr. William Goodell of Philadelphia was selected. The patient was prepared for operation and the result of the consultation was to determine whether it should be done or not. Dr. Goodell arrived at 9.30 A. M., examined the patient, concurred in the diagnosis, and approved of the operation, which I did in his presence, immediately after the consultation. The steps of the operation were as follows: a short central incision, removal of the ovaries and a portion of the tubes on both sides, pedicles ligated with silk. Wound closed with four interrupted silk worm gut sutures.

Result. The immediate recovery of the patient was uneventful. During the following winter which the patient spent in Europe, she had an attack of phlebitis of the right femoral

vein, and was treated successfully for two or three weeks by Prof. Winckle, of Dresden. I examined her on April 21, 1893, and could not detect a vestige of any fibroid tumor in the uterus.

Mrs. —, aged 46. Referred by Dr. Laidley. Patient has had four children and one miscarriage. Has had severe menorrhagia for four years. Examination reveals a fibroid tumor in the fundus of the uterus, which appears to be about as large as an orange.

OPERATION, JUNE 12, 1890. The ovaries and the greater portion of the tubes were removed through a short central incision.

Result. The patient recovered and was discharged three weeks later.

Note. In the following August the patient developed a small but painful exudate above the right fornix of the vagina. This however disappeared without suppuration, and a year latter all symptoms connected with her tumor disappeared, since which date I have heard nothing of her.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 30. Referred by Dr. Bell. Patient was married at eighteen, has borne three children at term, last labor seven years ago. Her labors have all been difficult and she has been an invalid since the last labor. Her health has been especially bad during the last six months. She has had much local treatment with but little benefit. Bi-manual examination reveals a painful condition of the uterine appendages.

OPERATION, JUNE 18, 1890. A short central incision, two and one half inches in length, which is almost always sufficient in these cases, was made. Through this the appendages were drawn up and removed

Result. Patient recovered and her subsequent history has been good.

There was a chronic inflammation of both ovaries and tubes.

Miss —, aged 22. Referred by —. Menstruated at twelve years of age, has had dysmenorrhea from the beginning of her menstrual period. She is also a victim of neuralgia. Has been subject to a great variety of local and constitutional treatment. One year ago Dr. Gill Wylie of New York opened her abdomen and shortened the round ligaments, without any appreciable benefit following. Upon bi-manual examination she complains of much pain in the pelvis.

OPERATION, JUNE 19, 1890. Ovaries and tubes removed through a short central incision. The uterus found in good position and no evidence of trouble about the site of Dr. Wylie's operation. There was chronic inflammation of both ovaries and tubes.

Result. She made a good recovery from the operation, and for several years afterwards, notwithstanding a wonderful change in her appearance, continued to complain of more or less distress in the lower part of the abdomen. Finally she returned at the end of September, 1894. A careful examination resulted in the conclusion that there was trouble in the appendix vermiformis. There had been no distinct attack of appendicitis, but the appendix was sore upon pressure, and could be distinctly felt. I made a very short incision, not exceeding an inch and a quarter, at McBurney's point over the root of the appendix, introducing a finger, I found the appendix harder than normal, and guiding a pair of forceps along the finger, drew it out of the incision. After ligation and removal of the Meso-appendix, a circular incision through the peritoneum of the appendix, about three eighths of an inch below the attachment of the appendix to the caput coli was made. The peritoneum

was then pushed back toward the caput coli and a silk ligature was tied firmly around the base of the stripped appendix, which was cut away just below the ligature. The stump was rubbed with a bit of iodoform gauze. The portion of peritoneum which had been pushed up above the point of ligation was used to cover the stump of the appendix. The stump of the Meso-appendix was also covered. The small wound was closed by step-suturing with catgut. She returned home a few weeks later. Two years later she returned complaining of pain in the right iliac region, in the meantime having accumulated considerable flesh. The discomfort is attributed upon examination, to adhesions in the neighborhood of the operation for appendicitis. Fourth operation, counting the one made by Dr. Wylie, June 18. Central opening at the site of original incision. Exploration with the fingers revealed the omentum adherent to the caput coli and lower end of the ileum. The adhesions were separated, and the disconnected portion of the omentum was removed.

Result. Her recovery was prompt. She returned home within a month. I am unable to give any further information concerning the future history of the case.

OVARIOTOMY.

Mrs. —, aged 46. Referred by Dr. Sharpnack, Greene Co., Pa. Multipara. Diagnosis, multilocular ovarian cyst. Patient measures fifty-two inches at the waist, more at the umbilicus. Lower extremities are edematous.

OPERATION, SEPTEMBER 4, 1890. A three and one-half inch incision in the central line. Large cyst tapped and contents withdrawn. Reduction of other cysts and withdrawal of the entire tumor, simultaneously with the separation of many adhesions, omental parietal and intestinal, the bleeding surfaces of which were controlled by pressure and hot water, and the

application of a few silk ligatures. The pedicle was grasped by Baker-Brown's clamp, and burnt off with the actual cautery close to the clamp. The portion of the pedicle within the clamp being well cooked. The cavity was irrigated with hot water, dried out and a long glass drain tube was left in the lower angle of the wound, which was closed with interrupted silk worm gut suture. The cysts and contents weighed 71 pounds.

Result. One quart of bloody fluid was discharged from the tube during the first twenty-four hours, the fluid becoming clear, the tube was removed a few hours later. The recovery was rapid and uneventful. November 29, 1900. The patient called upon me recently, she is in excellent health. December 26, 1900. Reported in good health.

OVARIOTOMY.

Mrs. —, aged 58. Referred by Dr. Pollock, Pittsburg, Pa. Married forty-one years. Sterile. Menstrual history good. Diagnosis, multilocular ovarian cyst.

OPERATION, SEPTEMBER 6, 1890. Three and one-half inch central incision, made by Dr. Pollock, who also evacuated and delivered the cysts. At his request I treated the pedicle, to which I applied Baker-Brown's clamp and severed the pedicle above the clamp with the hot iron, cooking well that portion of the pedicle grasped by the clamp. The cavity was flushed out with hot water, and the wound closed with interrupted silk worm gut sutures.

Result Uninterrupted recovery.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 65. Referred by Dr. Kirker, Allegheny, Pa. Widow. Patient's abdomen has been enlarging for two years, during which time her general health has suffered

severely. The abdomen is large and filled with ascitic fluid, and in which can be detected several solid masses. Diagnosis, cancer of the peritoneum. Exploratory operation determined upon.

OPERATION, SEPTEMBER 9, 1890. A free central incision permitted the escape of an enormous amount of ascitic fluid. A large mass filled the omentum, which was separated from many intestinal adhesions and completely removed. Large masses involving the ovaries were shelled out of both sides of the pelvis, ligatured as deeply as possible, and removed. Considerable bleeding from the pelvis was controlled by hot water, sponging and packing of the pelvis for a few minutes. After removal of the sponges the entire abdominal cavity was washed out with hot water, which had been taken from a spring near the house, and well boiled. The cavity having been dried out the wound was closed by interrupted silk worm gut sutures.

Result. The patient made an uneventful recovery, and enjoyed great relief for several months, when the disease manifested itself again. She died eighteen months after the operation from cancer of the peritoneum.

SUPRA-VAGINAL HYSTERECTOMY.

Miss —, aged 16. Referred by Dr. Bell. Patient has always been a healthy girl with the exception of the development of a goitre, until within two years, during which period she has been suffering from dysmenorrhea and menorrhagia. A globular mass occupies the abdomen below the umbilicus. Diagnosis of fibro-myoma made by Dr. Bell.

OPERATION, SEPTEMBER 10, 1890. Free central incision, four and one half inches, mass drawn into the wound, a silk ligature was passed on each side close to the uterus and tied across the infundibulo pelvic ligament excluding the ovary and tube and upper segment of the broad ligament, which was di-

vided with the scissors, three-fourths of an inch above the ligature. The ligated stumps, the surfaces of which had been seared with the Pacquelin cautery, were allowed to slip away. Lock handled forceps at the uterine cornua controlled any flow of blood from the uterus. The mass was now pulled entirely through the incision, and its base was surrounded by a rubber ligature, composed of a piece of rubber tubing, supported by cross pins passed at right angles to and through the uterus at about the junction of the body with the supra-vaginal cervix. The entire mass, uterus and tumor were cut away three quarters of an inch above the pins. The sponges were removed from the pelvic and abdominal cavities and the wound closed down to the stump with interrupted silk worm gut sutures. The stump was mummified with the Pacquelin cautery to considerable depth, and it and the wound were covered with a thin layer of iodoform, over which was applied a couple of ounces of boracic acid, over this antiseptic gauze, cotton and a binder.

Result. Patient returned home perfectly well in six weeks, and at this date, ten years later is still living and enjoying excellent health.

Note. I have on several occasions seen goitre associated with fibroid tumor of the uterus. This patient was the youngest subject I have ever met with who required a supra-vaginal hysterectomy for fibro-myoma. At the present writing in such case and especially at such an age, I would first have made an effort to remove the tumor by myomectomy, and save the uterus.

OVARIOTOMY.

Mrs. —, aged 48. Referred by Dr. Banks, Livermore, Pa. Multipara. Youngest child twelve years old. Abdominal enlargement, persistently progressing for last eighteen months. Very little discomfort, health still unimpaired.

Fluctuation distinct, surface of the cyst smooth and uniform. Diagnosis, par-ovarian cyst.

OPERATION, OCTOBER 22, 1890. Short central incision, two and one-half inches, cyst tapped with large Spencer-Wells trocar, collapsed, delivered, pedicle ligated with catgut, severed with the cautery, dropped into the pelvis. Wound closed with interrupted silk worm gut. Entire time twenty minutes.

Result. Recovered.

SALPINGO-ÖÖPHORECTOMY.

Mrs. —, aged 27. Referred by Dr. Bell. I quote the following letter from Dr. Bell: "Mrs. —, has been under my care for six months. I was first called to see her during her menstrual period, and found her vomiting incessantly. She was in a half-conscious condition, with retention of urine and various hysterical symptoms. This had been the history of her monthly periods for a long time. An examination revealed a lacerated cervix, a retroversion of the uterus, and a prolapsed ovary. I replaced the uterus and ovary, and fitted a pessary. Made applications of iodine, also iodine and carbolic acid, and every period has been worse than the preceding one. At the last she had complete paralysis of the left side for four or five days, as typical a case of hysterical paralysis, I suppose as ever existed. There was complete anaesthesia, even the left side of the tongue was entirely devoid of sensation. You will find the uterus retro-flexed, the cervix torn and ragged, the right ovary prolapsed and sensitive. I have advised operation."

OPERATION, OCTOBER 25, 1890. Short central incision, both ovaries and tubes removed. Wound closed with three interrupted silk worm gut sutures. Time occupied, six minutes. Assisted by Dr. Williamson, resident physician.

Result. Prompt recovery from operation. Persistence of hysterical symptoms continued for more than one year, after which time the patient was reported to be greatly improved in health.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 22. Referred by Dr. McCombs. Married seven years. Sterile. Menorrhagia, flow lasting ten days. Dysmenorrhea. Prolonged treatment has failed to benefit her; she is growing worse. Examination reveals chronic salpingitis and ovaritis.

OPERATION, OCTOBER 25, 1890. Short central incision, ovaries and tubes drawn up, pedicles ligated with silk and divided by Paquelin. Wound closed with interrupted silk worm gut sutures.

Result. Recovered; patient relieved of former suffering.

LAPAROTOMY FOR STRANGULATED UMBILICAL HERNIA.

Mrs. —, aged 65. Referred by Drs. Phillips and White. Both present and assisting at the operation, which was done at midnight. History.—Multipara. Last confinement twenty-five years ago. Has grown very fat. Has had an umbilical hernia for many years, which has frequently been strangulated, but always successfully reduced until this time. She has been vomiting for forty-two hours. The protrusion is about as large as the head of a three year old child, its surface is shining and discolored and about the base edematous. About the base is a chronic inflammation of the skin, a chronic eczema, exuding an irritating moisture.

OPERATION, OCTOBER 28, 1890. The surface of the abdomen, including the surface of the hernial protrusion, was thoroughly scrubbed with soap and water, rinsed off with pure

hot water, and scrubbed again with a mild bichloride solution, which was rinsed off with sterile water. An incision two and one-half inches long was made in the median line, below the protrusion, consequently below the ring. The index finger of the left hand was introduced into the abdomen, thence into the ring, against its inner lower boundary. The first incision was now carried a little higher, and a probe pointed bistoury was directed along the finger and the ring was incised beneath the tip of the finger, from within outwards. The ring parted with an audible snap. A large mass consisting of several feet of small intestine of a mahogany color and a large piece of omentum, were immediately released. The tip of the omentum was adherent in the sac, which was detached, and cut away. From the top of the abdominal wound an incision was carried around each side of the sac uniting above it. This incision included the ring and its contents. The sac was completely dissected back to the internal margin of the ring, and removed with the over lying skin. With the scissors, the ring was split around the entire circumference. The wound in the abdominal wall, including the opened ring, being continuous. The abdomen was flushed out with hot water, sponges removed and the wound closed by interrupted silk worm gut sutures, and covered with a dry antiseptic dressing.

Result. Prior to operation the patient had not been able to retain any nourishment for two days, and had slept very little, this with the shock of the operation delayed prompt union in the wound, which, owing to the bad condition about the base of the hernial protrusion, had been infected. Consequently the wound suppurated, but under the skilful care of Drs. Phillips and White, she made a complete recovery.

LAPAROTOMY FOR PELVIC ABSCESS.

Mrs. —, aged 30. Referred by former patient. Has had a long standing pelvic abscess, which has refilled repeatedly.

Her temperature is ranging above one hundred, and pulse averages about 120 beats per minute from day to day. She has frequent sweats and hectic. I opened the abscess per vaginam on October 17th, and attempted to wash out the sac and introduce a drain tube. Irrigation of the vagina and sac was practised until November 2d following, the septic symptoms continuing without abatement. Pulse was now running at 130 every day, chills were frequent, followed by copious sweats, and the patient's condition looked hopeless. In spite of the requests of her nurses, not to attempt to do anything more for her, I picked her up in my arms and carried her into the operating room and laid her on the table, and sent down stairs for the resident physician, Dr. Williamson, to assist me.

OPERATION, NOVEMBER 3, 1890. The patient's night gown is wet from the profuse sweat following the last chill, ether is administered by a nurse, and a hypodermic consisting of an eighth of a grain of morphia with atropia is injected beneath the skin of the forearm. The abdomen was scrubbed off rapidly with soap and water, followed by alcohol with a piece of gauze. Free central incision revealed the abdominal contents. Several loops of intestine and the lower end of the omentum were found adherent to the top of the abscess sac, they were detached and the tip of the omentum ligated and removed. The true pelvis was completely filled, neither the uterus, ovaries or tubes were distinguishable. The abscess sac was thin and easily palpated with the fingers. In fact the true pelvis seemed to be completely roofed over. Pressure on the sac from above with the hand, gradually collapsed it, and evacuated a large quantity of stinking pus through the opening in the vault of the vagina. The abdomen was washed out with hot water, wound closed by interrupted silk worm gut sutures and protected by an antiseptic dry dressing of iodoform and boracic acid.

Note. By Dr. Williamson, November 4. Pulse fell to 89

seven hours after operation. Pain relieved, patient taking nourishment.

Result. The detachment of the intestines from the roof of the abscess sac permitted it to collapse and to keep itself drained through the wound in the vagina, through which irrigation was continued. The patient was given alcohol and quinine, strychnia and good nourishment, and though slow, made a complete recovery, being discharged eight weeks later.

Note. Ten years later this patient remains in excellent health, and for the greater portion of the time since her operation has earned her living as a saleswoman.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 27. Referred by Dr. Clark, Pittsburg, Pa. Multipara. Persistent dysmenorrhea, not relieved by treatment. Suffers a great deal from neuralgia, and laterally her health has been failing rapidly. Her physician, Dr. Clark, requests the removal of her ovaries and tubes.

OPERATION, NOVEMBER 7, 1890. Short central incision, appendages on both sides removed, ovaries and tubes both appear to be normal. Wound closed with three or four interrupted silk worm gut sutures. Time, eight minutes.

Result. Uninterrupted recovery.

Note. The operation was doubtless urged by her family physician, not only for the cure of local pain and persistent dysmenorrhea, but also with the hope of curing the general neurotic condition of the patient, and these objects were accomplished.

Mrs. —, aged 26. Miscarries all her pregnancies. A mass is felt in the left vaginal fornix, and the right vaginal fornix is tender. Persistent leucorrhea, and dyspareunia.

OPERATION, NOVEMBER 10, 1890. Present, Drs. McCready and Ferree. Short central incision, both ovaries and tubes

found adherent, adhesions broken up with the finger, ovaries and tubes on both sides removed. Pelvis washed out, wound closed. Time ten minutes.

Result. Recovered.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 35. In consultation with Dr. Lange. Obscure, painful symptoms, giving rise to a suspicion of ruptured ectopic gestation.

OPERATION, NOVEMBER 12, 1890. Short central incision, some free ascitic fluid in the pelvis, result of a recent pelvic peritonitis. Nothing else found, pelvis washed out with hot water, wound closed. Procedure lasted but a few minutes.

Result. Recovered satisfactorily.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 43. Referred by Dr. W. C. Frew. Sterile. Menstruation regular but painful. Pain in the left groin constant for eighteen months. Both vaginal fornices, right and left, painful.

OPERATION, NOVEMBER 24, 1890. Short central incision, ovaries and tubes found adherent. Adhesions separated by the fingers. Ovaries and tubes on both sides removed, pelvis flushed, wound closed. The ovaries were small and cirrhotic, tubes thickened and firm, interstitial salpingitis.

Result. Recovered.

Mrs. —, aged 21. Referred by former patient. Has been married seven months, has had amenorrhea for two years. Abdominal tenderness, both sides. Dyspareunia. Entire absence of sexual appetite. Uterus measures one and one-half inches, one ovary enlarged.

OPERATION, DECEMBER 10, 1890. Short central incision, appendages non-adherent. Right ovary cystic practically destroyed. Left small, smooth and glistening. No evidence of ruptured follicles on the surface. Appendages on both sides removed. Pelvis flushed out with hot water, wound closed.

Result. Stitch hole abscess nine days later. Recovered.

LAPAROTOMY.

Miss —, aged 25. Referred by Dr. Ansley, Saltsburg, Pa. Menstruated at twelve, regular and painless for seven years. In 1883 had an attack of peritonitis, when an abdominal tumor was discovered. Was treated for tumor until 1887, says that she has been tapped one hundred and one times, and that eight gallons of fluid were removed two weeks ago. Her abdomen is now immense, and measures fifty-six inches in circumference. She is very short of stature.

OPERATION, DECEMBER 13, 1890. Central incision, six inches long, in median line. Evacuation of sixty-five pints of ascitic fluid, pelvis sponged dry after separation of some adhesions between the tumor and the left lateral wall of the abdomen. The tumor as large as an adult head, the right ovary and tube adherent upon its side, sprang from the right broad ligament, and had a distinct pedicle, which was ligated with silk, and divided with the scissors. The ovary and tube were stripped off the tumor and left behind. The tumor was of the variety termed by the late Thomas Keith, of Edinburgh, a "weeping fibroid." A glass drain tube was left in the lower angle of the wound, the remainder of which was closed with interrupted silk worm gut sutures. Usual dressing. In all instances in which a drain tube was left, a piece of rubber dam eighteen inches square was perforated in the center by a very small opening, which was sprung over the presenting end of

the tube. A small antiseptic sponge or a small quantity of antiseptic absorbent cotton was laid over the mouth of the tube and completely covered by folding the rubber dam over it. The tube was removed in twenty-four hours and proved to have been unnecessary.

Result. Uninterrupted recovery and complete restoration to health.

Note. I find it hard to get rid of earlier teaching in regard to drainage, but am resorting to it less and less.

OÖPHORECTOMY FOR MULTIPLE FIBROIDS.

Miss —, aged 37. Referred by Dr. Geyer. For two or three years menstruation, while regular, has been very profuse. In November last pelvic tumor was diagnosed by her physician. The tumor fills the cul de sac of Douglass, the upper true pelvis, and reaches well up toward the umbilicus. It is irregular in shape, very hard and painless upon pressure, the uterine cavity is increased in depth, menorrhagia is a prominent symptom, and between the menstrual periods there is a serous leucorrhea. Diagnosis, multiple fibroids.

OPERATION, JANUARY 2, 1891. Central incision, removal of the ovaries and fimbriated extremities of the tubes.

Result. Uneventful recovery.

Note. On December 11, 1900, in answer to an inquiry by mail, I received from her family physician, Dr. J. L. Geyer, a letter in which he says, "I hear no complaints from herself or friends." He says that she has become stout and is engaged in housework. Recent authors condemn this operation. One author says it is played out. Now I wish to disagree with these gentlemen, not as to the fact that the operation occasionally fails, but to their unjustifiable and uncompromising denunciation of it. This operation, the dangers of which are trifling as com-

pared with supra-vaginal hysterectomy, does very frequently succeed in arresting the growth of fibroid tumors of the uterus, and in causing their disappearance may well be applied to those cases in whom supra-vaginal hysterectomy is objectionable. On the thirty-first day of January, 1883, at the Samaritan Hospital in London, I saw Dr. Bantock do a supra-vaginal hysterectomy for fibroid tumor, in which case he had on the sixth of April, 1881, removed the ovaries and tubes without having arrested the growth of the tumor, and he also told me of another case in which he had done supra-vaginal hysterectomy several years after Mr. Lawson Tait had removed the ovaries and tubes in the case. There is no doubt that the removal of the ovaries and tubes for the arrest of the growth does not always accomplish that for which it was intended. But nevertheless it is a surgical procedure fraught with good results in the treatment of fibroid tumors, which is not to be lightly condemned. I have done it a good many times during the last seventeen years. One of the cases died from subsequent intestinal obstruction, all of the others recovered from the operation, and I have knowledge of all of them at this moment excepting one, and without an exception the operation has accomplished that for which it was intended. The remaining case was done a year ago last June, and her health is restored and her tumor is gradually disappearing.

In the surgical craze which has swept over this country during the last ten or twelve years there has been, and continues to be, a mania for the exploiting of major surgical procedures, and the mortality has certainly been increased. There is no doubt that the surgical treatment of fibroid tumors during the last ten years has been immensely improved, and the credit of this is largely due to Baer of Philadelphia and Kelly of Baltimore.

But I am by no means prepared to say that every woman with a fibroid tumor, at any stage of its development, should

be subjected to a surgical procedure for its removal. It can be distinctly proven by statistics that the mortality of fibroid tumors without surgical procedure for their relief is less than the mortality occasioned by surgical operations. There are exceptions to all rules; every case of fibroid tumor should be considered with reference to operation on its own merits. Symptoms endangering life, such as uncontrollable hemorrhages, rapid growth, the complications of pregnancy, constant suffering, or the inability of the patient to earn her own living, or where the fibroid is a barrier to a prospective marriage, may form sufficient reason for the institution of a surgical operation. But the present indiscriminate operating for fibroid tumors is of more than doubtful propriety.

OVARIOTOMY.

Mrs. —, aged 50. Referred by Dr. Kirker, Allegheny, Pa. Multipara. Has had a multilocular ovarian cyst for several years. Saw her in consultation with Dr. Kirker on January 10, 1891. She was in bed with an attack of peritonitis, which had been ushered suddenly, accompanied by severe pain in the abdomen.

OPERATION, JANUARY 11, 1891. Free central incision, escape of considerable ascitic fluid mixed with ovarian fluid. Well marked peritonitis existed over considerable area. One of the cysts was discharging its fluid into the abdominal cavity. The cysts were emptied with the trocar, some adhesions were broken up with the hand, and the cysts were delivered. The pedicle was very short, and was securely ligated with considerable difficulty, after which it was divided with the scissors. The abdominal cavity was thoroughly flushed out with boiled water. The after treatment was conducted in consultation with Dr. Kirker.

Result. Recovered.

Note. My experience has led me to the same conclusion to which older operators had arrived, with reference to patchy peritonitis, and even general peritonitis, in women suffering from ovarian cysts. The attacks are ushered in by the occurrence of sharp pain, occurring suddenly. The severity and the extent of the attack of peritonitis following, is due to the character and quantity of the fluid which escapes from the ruptured cyst. Reference is now made only to those cases in which the rupture is the result of intra-abdominal development of the growth, and where as a rule, the opening in the cyst is small, and consequently the fluid escapes slowly. Patients the subjects of developed ovarian cysts, are especially liable to the accident of rupture. I recall at this writing, the aged mother of my esteemed friend Dr. Wm. J. Langfitt of Allegheny, Pa. She postponed operation until she had first made a visit to her son, living a few miles out of the city. It was in the winter season, while on that visit she went out of the house, slipped on the ice, ruptured a cyst, and died of peritonitis. I have also in my mind the case of a lady with a multilocular ovarian cyst, who, falling down a flight of stairs, ruptured a cyst, and whose case will be found among these notes.

EXPLORATORY LAPAROTOMY.

Miss —, aged 22. Referred by Dr. Phillips. From her fourteenth year until five months ago her menstruation was regular and painless. At the latter date it failed to appear, and she has not menstruated since. Prior to that date the abdomen was enlarging. She suffers a great deal of pain in both iliac regions and back, and has frequent attacks of nausea. The abdomen is large and symmetrical. Fluctuation is distinct everywhere, and in long waves. The vault of the pelvis is choked. In deep inspiration and respiration there is no evidence that the cyst glides upwards

or downwards on the abdominal wall. The patient is emaciated only to a moderate degree, and her color is that of health. Diagnosis, adherent and large par-ovarian cyst.

OPERATION, FEBRUARY 4, 1891. A free central incision entered directly into the cyst, and was immediately followed by a sudden evacuation of its contents. The cyst was now found to be malignant, unilocular, universally adherent, completely shutting off all abdominal viscera. The bottom of the cyst was full of papillomatous growths. The wound was closed with interrupted silk worm gut sutures and patient put to bed.

Result. At the end of six days the stitches in the abdominal wound were removed and the wound opened up in its entire length, the cyst discharging a large quantity of fluid through the open wound. For the following twelve weeks the patient remained in the hospital, the wound closing down to a drain tube in the lower angle. At this period the patient began to manifest the symptoms of constitutional contamination in cases of advanced malignant disease. At the end of three months from the date of exploration she was returned home, and three months after that date she died.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 32. Referred by Dr. Clover. Multipara.

Last confinement five years ago. Has menorrhagia, almost constant headaches, obstinate constipation, dyspareunia, dysmenorrhea, irritable bladder, dysuria, and fissure. Bimanual examination. Endometritis, chronic, cervix lacerated, both ovaries in Douglass cul de sac.

OPERATION, JANUARY 25, 1891. Short central incision, removal of appendages on both sides, after breaking up adhesions with the fingers. Wound closed with interrupted silk worm gut sutures. Dry antiseptic dressing. Time, sixteen minutes.

Result. Recovered.

Miss —, aged 33. Referred by Dr. Cort. Menorrhagia with dysmenorrhea. Uterus retroverted. Ovaries and tubes adherent.

OPERATION, JANUARY 25, 1891. Short central incision, separation of adhesions with the fingers, ovaries and tubes on both sides removed.

Result. Recovered.

Mrs. —, aged 28. Referred by Dr. O'Brien. Multipara. Miscarriage two years ago, followed by infection. Diagnosis, chronic salpingitis and ovaritis.

OPERATION, FEBRUARY 4, 1891. Short central incision, removal of appendages on both sides, wound closed and dressed as usual.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 42. Referred by Dr. Ackermann. One child at term, frequent miscarriages since. An extensive laceration of the cervix exists, in which cancer has developed.

OPERATION, FEBRUARY 8, 1891. Uterus and appendages removed by Fritsch's method.

Result. Recovered.

Note. I kept track of this woman for something over a year, during which time there was no return of the disease. Her removal to a distant State and loss of her address prevented me from following up the case.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 42. Referred by Dr. Gladden. Widow. Multipara. Abdomen has been filling up for two years, has valvular insufficiency, heart action very irregular. There

being no edema of the lower extremities nor other portions of the body, and the enlarged abdomen giving out no evidence of any affection beyond a simple dropsical effusion, diagnosis was not expressed. Instead of paracentesis I preferred a short incision, which was made, and through which between four and five gallons of ascitic fluid escaped. I introduced two fingers, and failing to discover anything closed the wound. A year later the abdomen had not refilled. No anesthetic was administered.

Note. The case may have been one of tubercular peritonitis.

SUPRA-VAGINAL HYSTERECTOMY FOR FIBROIDS.

Miss —, aged 26. Referred by Dr. Purrington, Indiana, Pa. Tumor discovered six years ago. Abdomen is enlarged, suffers pain, has chronic constipation and dysuria. Has been subjected to Apostoli's method of treatment by electricity without benefit. A great many puncture marks upon the surface of the abdomen show where electric needles were introduced directly into the tumor.

OPERATION, FEBRUARY 11, 1891. A long central incision revealed a large fibroid tumor. Some adhesions were broken up, and the uterus containing the tumor was brought into the wound. The broad ligaments were ligated and divided, allowing the entire mass to be lifted well out. The tumor was interstitial, well covered with uterine tissue. A rubber ligature was thrown around the neck of the uterus and secured. With a strong knife I bisected the tumor vertically and shelled out each half from its capsule. Two pins were now passed at right angles to and through the pedicle, which was very short, above the elastic ligature. The uterus was cut away above the pins and the stump was mummified with the Pacquelin. The sponges which filled the pelvis and lower abdomen were now removed

and the wound was closed down to the stump, which was covered with a heavy layer of iodoform, boracic acid and tannin. The tumor and uterus weighed nine and one-half pounds.

Result. Smooth recovery.

Note. Koeberle's serre-neud or the elastic ligature choke off the stump and separate it in from thirteen to twenty days. The lower end of the pedicle retracts, leaving a deep pressed opening at the lower angle of the wound. This is kept scrupulously clean with antiseptics, its margins stimulated with iodine or slight touches of nitrate of silver. Cicatrization occurs about the end of the fifth or early part of the sixth week. Occasionally I have removed the rubber ligature at the end of two weeks, and cut away the dead end of the pedicle with scissors. The patient in this case is now, after ten years, living and in excellent health.

OVARIOTOMY.

Mrs. —, aged 26. Referred by Dr. Bell. The patient is now three and one-half months advanced in her sixth pregnancy. She has had three living children and two miscarriages. After each of her labors and her two miscarriages an ovarian cyst has been found present in her abdominal cavity. When the patient was placed upon the operating table it was observed that the abdomen was much flatter than it had been at the examination a day or two before, but the patient had made no complaint of pain and had no rise of temperature.

OPERATION, APRIL 2, 1891. A four-inch central incision opened the peritoneal cavity. Six or eight pints of cyst fluid escaped and were sponged out. The cyst had ruptured before she was put on the table, possibly when she was being conveyed, under an anesthetic, from her bed to the table. The ruptured cyst was found to occupy the left broad ligament. It

was drawn up and enucleated with great difficulty, accompanied and followed by quite free hemorrhage, which was checked with hot water and sponge packing. After some suturing of the ligament with silk, the abdominal wound was closed by the introduction of three rows of sutures, the first and second rows being catgut. The first uniting the edges of the peritoneum, the second the edges of the abdominal aponeurosis, the third row united the skin and fat and consisted of silk worm gut.

Result. Uneventful recovery, pregnancy undisturbed, patient confined at term.

TOTAL VAGINAL EXTIRPATION.

Mrs. —, aged 40. Referred by her husband. Laceration of the cervix, development of large "cauliflower" cancer.

OPERATION, APRIL 2, 1891. "Cauliflower" growth was broken down and removed with a Simon's spoon and the vagina thoroughly washed out with hot antiseptic solution. The neckless uterus was carefully separated from the bladder and rectum, lock-handled clamp forceps being used for the compression of ligaments on both sides. The uterus was cut away between the forceps, which were left in position for forty-eight hours. Strips of iodoform gauze were passed through the opening in the vault of the vagina as high as the tips of the forceps. When the forceps were removed at the end of forty-eight hours the gauze strips saturated with secretion were also removed and fresh strips of iodoform gauze were carried to the top of the vagina. These were removed at the end of four days and daily irrigation of the vagina with 1.4000 bichloride solution was kept up until the patient recovered and left the hospital, twenty days after the operation.

Mrs. —, aged 42. Referred by Dr. Ogden, of Ohio. Cancer of the cervix developing one year ago.

OPERATION, APRIL 13, 1891. Separation of the uterus from the bladder and rectum, application of Eastman's clamps,

one on each side of the uterus, made to embrace the entire broad ligament, uterus cut away between the clamps.

Result. Recovered.

Note. Died within a year from the return of the disease.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 24. Referred by former patient. Has severe dysmenorrhea, spends one week out of each month in bed. Bi-manual examination reveals a large right ovary.

OPERATION, APRIL 25, 1891. Removal of appendages on both sides through a short central incision. Right ovary enlarged and cystic, degenerating. Left ovary very small and cirrhotic.

Result. Recovered.

Miss —, aged 30. Referred by former patient. Has suffered from dysmenorrhea for many years. Health broken, is now a confirmed invalid, entirely dependent upon her friends for support.

OPERATION, APRIL 29, 1891. Appendages removed on both sides. The note book fails to record anything concerning the appearance of the appendages, but states that the operation was finished in sixteen minutes.

Result. She was discharged as recovered at the end of three weeks. She had a great struggle during the first year, but at the beginning of the second year sound improvement began, and now, after ten years, she is in excellent health, having earned more than a good living for eight years.

LAPAROTOMY FOR TUBERCULAR PERITONITIS.

Mrs. —, aged 42. Referred by Dr. Clark. Patient's abdomen is very much distended, has the history of repeated attacks of peritonitis.

OPERATION, APRIL 29, 1891. Central incision, hand introduced into the abdominal cavity, separating adherent coils of intestine at several points. Cavity flushed out with hot water, glass drainage tube in lower angle of the wound, which was closed with interrupted silk worm gut sutures.

Result. Prompt recovery, with a fecal fistula at the upper angle of the wound, which subsequently healed.

OVARIOTOMY.

Mrs. —, aged 40. Referred by Dr. Davidson. A rapidly-growing multilocular ovarian cyst is diagnosed.

OPERATION, MAY 16, 1891. Central incision, breaking down of several cysts with the trocar, separation of almost universal adhesions in the pelvis, delivery of the tumor by final enucleation from the right broad ligament. No pedicle. Macroscopic appearance of the growth malignant. Pelvis washed out with hot water and a drain tube was left in the lower angle of the wound for twenty-four hours. Wound closed with silk worm gut sutures.

Result. Uneventful recovery. Future history unknown.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 31. Referred by Dr. Engle. The patient is very fat, anemic and neurasthenic. Has the history of repeated attacks of pelvic peritonitis. The uterus is but slightly movable. Has an exudate above the right vaginal fornix. Above the left vaginal fornix pain is also present and a "doughy" mass is made out. The patient has suffered thus for about nine years.

OPERATION, MAY 18, 1891. Long, central incision through a layer of two and one-half inches of fat. Shorter incision through the abdominal aponeurosis down to the peritoneum

and short incision in the peritoneum. This incision, long through the skin and fat layers and short in the peritoneum, admitted of the full use of the fingers in the exploration. Both ovaries and tubes were found adherent. With the finger tips planes of cleavage were sought for. On the left side the ovary and fimbriated end of the tube came out entire. With some difficulty the pedicle was secured and ligated and the ovary and fimbriated end of the tube cut away. On the opposite side the task was more difficult. In the attempt to separate the mass, including the ovary and tube, a pus sac was entered with the fingers and the pus escaped into the pelvis. At the end of forty-five minutes, using the fingers as a curette, I had succeeded in digging out the fimbriated end of the tube, broken down ovarian tissue, which I supposed included the entire ovary, and quite a lot of soft, disintegrated tissue, which I supposed constituted the exudate which imprisoned the pus about the adherent fimbriated end of the tube and ovary. There was very free bleeding. On the right side I had applied two ligatures. One of them surrounded the tube near the uterus and the other was on the distal end of a strip of tissue, the proximal end of which was adherent to part of the mass brought up, and which had been cut away with the scissors. The pelvis was carefully sponged out with very hot water, after which a long, hard rubber tube, attached to a reservoir of very hot water, was passed to the bottom of the pelvis, and while the intestines were held back with the fingers of the left hand the pelvis was completely flushed out. After being sponged dry a glass drainage tube was inserted and left protruding at the lower angle of the wound, which was closed with interrupted silk worm gut sutures. The tube was removed on the following day.

Result. Recovered.

Future History. Patient's health remained unsatisfactory and she continued to menstruate with regularity. About four-

teen months later she returned to the city, complaining of severe pain on the left side. In the left vaginal fornix I could distinctly detect a mass which was painful and which I opened with a slender bistoury. A couple of ounces of pus escaped into the vagina, and in it I found a ligature, probably the one which had been placed on the left pedicle. The abscess cavity was washed out and drained for a few days, when she returned home. I heard nothing of her again until in November, 1900, when her husband called upon me and told me she had been in excellent health for some years and had continued to menstruate regularly until a few months ago, when she became pregnant. He further says that the child is viable, movements being distinctly felt.

Note. This patient was confined at term without any difficulty occurring. Some ovarian tissue had been left.

PORRO OPERATION.

Mrs. —, aged 41. Referred by Dr. Ikirt, East Liverpool, Ohio, and Dr. James Dickson, Canonsburg, Pa. Married at thirty-eight years of age, has not given birth to a child. Is a tall, emaciated woman, very much frightened, with an immense abdomen. Has had amenorrhea for five months, that is, four menstrual periods have been missed. On account of the great trepidation of the patient, the physical examination was deferred.

EXAMINATION AND OPERATION, MAY 23, 1891. The patient was anaesthetized and placed upon the operating table. The abdomen was now exposed and I saw it for the first time. Diagnosis arrived at, an unusually large, degenerating fibromyoma. I decided to do a supra-vaginal hysterectomy. A twelve-inch incision in the median line, subsequently extended to fourteen or more inches, exposed the tumor, which was pear-shaped, and completely filled the pelvis, reaching almost to the

ensiform cartilage. The adherent omentum was stripped off and some of its torn vessels ligated, and a small portion of the omentum was cut away. A towel was now wrapped around the omentum and it was laid to one side of the wound. Not the slightest fluctuation could be detected in the tumor, but adhering to my pre-conceived opinion, based upon the rapidity of the growth, I drove a trocar through more than an inch of solid wall and entered a cavity from which eight pounds of dirty, thick, viscid fluid was evacuated. After withdrawing the trocar the dome of the tumor was drawn through the incision, or, more properly speaking, the distended incision was pushed over the dome. Dr. Williamson, the resident, assisting, lifted the tumor upward and forward, until it rested outside of the cavity, completely interfering, by its magnitude, with any intelligent manipulations behind it.

Pushing the fingers of the left hand down into the pelvis behind the mass, I announced that the uterus was enlarged and that the fundus was continuous with the tumor. I decided to cut the tumor away above its junction with the uterus. Two turns of a bit of rubber tubing were made around the base of the mass and with the fingers pushed down as far as possible into the pelvis. A secure knot was made in the tubing, which was released and entirely disappeared out of sight. It was now clear that the tumor was sub-peritoneal, that it grew from the fundus of the uterus, and that its base, at the juncture with the uterus, was three or four inches in diameter. After protecting the abdominal cavity with flat sponges, which also surrounded the mass at its base, I selected a point which I supposed was above the beginning of uterine tissue, I completely bisected the base of the tumor, which was now transferred to a large tin vessel. I had amputated the tumor a little too low down, and the cut surface, fully four inches in diameter, was in uterine tissue. In the center of this surface an opening an inch in length communicated with the cavity of the uterus, and

through it a loop of umbilical cord presented. Up to this moment the idea of pregnancy had not entered into the diagnosis. An examination of the rubber ligature found it encircling the uterus and appendages well down below the fundus. Through the aperature at which the loop of umbilical cord was presenting I passed the index finger of my left hand and with a pair of scissors split up the uterus and delivered a living child at about the fourth month of utero-gestation, with its placenta. Two hysterectomy pins were passed at right angles through the uterus above the elastic ligature, and the uterus was cut away. The sponges were removed from the abdominal cavity, which was flushed out with hot water, the omentum was returned to its proper position, and the wound was closed with interrupted silk worm gut sutures down to the stump, supported by the pins in the lower angle of the wound. The stump was dressed as in cases of supra-vaginal hysterectomy already cited and the patient put to bed.

Result. Uneventful recovery.

Note. The Porro operation was originally designed as a modification of the Cesarean Section. Its performance under such circumstances as I have related is rare, but not novel, in illustration of which statement I submit the table prepared by the late Dr. Robert Harris, of Philadelphia, and extracted from the transactions of the American Gynecological Society, Volume 16. After the publication of this table by Dr. Harris, Dr. Ross, of Toronto, Canada, reported a similar case. On the sixteenth of July, 1891, after the recovery of this woman, Dr. Harris writes me: "Your case belongs to the second classification of Godson, of which there have been but few cases, the children not being viable. Agnew had the only one in U. S. besides your own.* . . . We have had eighteen full Porro operations in the U. S., with eleven deaths and ten living children, and two premature, puerperal hysterectomies, with one woman (your own) saved." In this case the child was

* My second and third cases have been added to the table.

CASES OF PREMATURE PUERPERAL HYSTERECTOMY.

NO.	DATE.	OPERATOR.	AGE.	CAUSE OF DIFFICULTY.	STAGE OF PREGNANCY.	RESULT TO WOMAN.	CAUSE OF DEATH IN WOMAN.	REFERENCE.
1	Jan. 7, 1877.	Dr. Rob't B. Barnes, London.	—	Fibro-Myoma of Uterus.	2 months.	Died.	Shock and Peritonitis.	St. George's Hosp. Rep. 1874-75 page 91.
2	Mar. 2, 1880.	Prof. Kaltenbach, Freiburg, Germany.	32	Fibro-Myoma of Uterus, 6¾ lbs.	22 weeks.	Recovered.	Recovered.	Centralb fur Gyn. July 17, 1880.
3	Mar. 18, 1880.	Prof. A. Wassergau, Liege, Belgium.	35	Cystic Fibro- Myoma of uter- us, 9 lbs.	18 weeks.	Died.	Peritonitis.	Bull de l'Acad voyde Med. de Belg t XIV. 3 e Ser. No. 4.
4	Aug. 16, 1880.	Prof. D. H. Agnew, Philadelphia.	44	Fibro-Myoma of Uterus.	6 months.	Died.	V omiting and exhaustion.	Communicated by operator to R. P. H.
5	July 12, 1882.	Mr. J. K. Thornton, London.	38	Fibro-Myoma of Uterus.	4½ m'ths.	Recovered.	Recovered.	Communicated to Dr. Godson.
6	July 13, 1882.	Dr. Thos. Savage, Rugby, Eng.	25	Fibro-Myoma of Uterus, 6 lbs.	16 weeks.	Recovered.	Recovered.	Brit. Med. Journal, Sept. 2, 1882.
7	Jan. 13, 1883.	Prof. Carl Schroeder, Berlin.	40	Fibro-Myoma of Uterus.	3 m'ths.	Recovered.	Recovered.	Communicated to Dr. Godson.
8	Sept. 15, 1883.	Dr. Thos. Savage, Birmingham.	22	Occlusion of Vagina.	6 m'ths.	Recovered.	Recovered.	Birmingham Med. Review. Nov. 1883.
9	Jan. 17, 1884.	Dr. Geo. Fortescue, Sydney, N. S. Wales.	21	Ovarian Cys- toma. Uterus punctured.	5 m'ths.	Recovered.	Recovered.	Australian Med. Ga- zette. May 15, 1884.
10	June 23, 1884.	Prof. Carl Schroeder, Berlin.	34	Large Fibro- Myoma of Uterus.	2½ m'ths.	Recovered.	Recovered.	Communicated to Dr. Godson.
11	Dec. 28, 1889.	Prof. Gustav Braun, Vienna.	33	Malacosteon.	6½ m'ths.	Recovered.	Recovered.	Wiener Med. Woch. Nov. 8, 1890, page 1032.
12	May 23, 1891.	Dr. R. S. Sutton, Pittsburg, Pa.	41	Fibro-Cystic Myoma, 22 lbs.	5½ m'ths.	Recovered.	Recovered.	American Gynecol- ogical Trans. 1891.
13	Apr. 25, 1895.	Dr. R. S. Sutton, Pittsburg, Pa.	29	Fibro-Cystic Myoma, 10 lbs. <i>4½</i>	3 m'ths.	Recovered.	Recovered.	American Gynecol- ogical Trans. 1895.
14	May 9, 1895.	Dr. R. S. Sutton, Pittsburg, Pa.	28	Subaceous Inter- stitial Myomath.	3½ m'ths.	Recovered.	Recovered.	American Gynecol- ogical Trans. 1895.

viable and lived for a few minutes. I doubt whether it weighed more than a pound and one-quarter.

Subsequent Reflections.

This patient was from recent reports still living and in good health. It is now nearly ten years since I performed this operation, and having kept constantly at work since that period have learned many things which I did not know before. When a married woman, the subject of a fibro-myoma, ceases to menstruate, and to experience simultaneously with the amenorrhea a phenomenal growth of her tumor, she is probably pregnant. Were I to encounter a similar case at this time, instead of amputating the tumor from the fundus of the uterus, I would, as I have frequently done since, have bisected the tumor in its long diameter and shelled the halves out of the capsule. By this method the uterine tissue would have escaped injury and there would have been a better chance to have saved both mother and child.

With one exception this woman was the oldest operated upon for similar conditions. The weight of material removed was greater than from any of the other cases. Eight pounds of fluid were withdrawn from the interior of the tumor. The tumor, thus depleted, weighed ten pounds, and the fetus, placenta and amputated portion of the uterus weighed two pounds, making in all twenty-two pounds.

TOTAL VAGINAL EXTIRPATION.

Mrs. —, aged 45. Referred by Dr. Deemar. Multipara. Patient has long been the subject of uterine disease. The cervix is peculiarly hard and shows an old laceration. But there is no erosion present. Menorrhagia. Patient has been suffering for two years from melancholia.

OPERATION, MAY 23, 1891. Vagina was separated from the neck of the uterus first by dividing the vaginal reflection

circularly with Schroeder's Catling-shaped knife, and dissecting up to the peritoneum in front and behind the uterus with the index finger. The uterus being free from the rectum and bladder, lower segments of the broad ligaments were clamped off with lock-handled forceps and divided. The uterus was pulled down and the appendages tied off with silk ligatures, the uterus, including the appendages, was removed.

Result. Recovered with a small vesico-vaginal fistula, which was successfully closed with silver wire suture.

Note. Prior to operation it was thought that the cervix was the seat of Schirrus, but the diagnosis was uncertain, and it was thought best to give the patient, at her age, the benefit of any doubt, and there has never been any return of the disease in the vault of the vagina. So far as I know this was the first case in which so much consideration was extended to a patient of this kind in the United States. Her future history has more than verified the wisdom of the treatment.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 29. Referred by Dr. McCombs. Has had repeated attacks of pelvic peritonitis. Uterus is retroverted and adherent. A mass is felt upon either side of it.

OPERATION, JUNE 6, 1891. Central incision. With the tips of two fingers introduced in the wound to the bottom of the pelvis a mass consisting of diseased ovary and fimbriated end of the tube was peeled up from the floor of the pelvis and the posterior surface of the broad ligament on both sides of the uterus. Also slight adhesions between the posterior surface of the uterus and the intestine were broken up. The free appendages were now in turn drawn through the abdominal wound, the pedicles ligatured with silk and divided with the Pacquelin cautery. The pelvis was flushed out with hot water by means of a long, hard rubber tube. Wound was closed with inter-

rupted silk worm gut sutures and covered with a thick layer of iodoform and boracic acid, a gauze compress, a layer of absorbent cotton, and a three-tailed abdominal binder.

Result Uneventful recovery.

LAPAROTOMY FOR TUBERCULAR PERITONITIS.

Mrs. —, aged 48. Referred by Dr. Bell. Tubercular subject with abdomen full of fluid.

OPERATION, JUNE 15, 1891. Central incision, evacuation of a large quantity of fluid. Cavity flushed out with hot water.

Result. Recovered. Subsequent history unknown.

OVARIOTOMY, WITH FREUND'S OPERATION FOR CANCER OF THE UTERUS.

Mrs. —, aged 51. Referred by Dr. Mark Rodgers, Tucson, Arizona. An old subject of uterine disease, severe and persistent menorrhagia, and metrorrhagia, rapidly-growing tumor in the pelvis and lower abdomen. Diagnosis, malignant disease.

OPERATION, JUNE 16, 1891. Abdominal and vaginal technique, consisting of scrubbing with soap and water, followed by hot water. Long central incision, namely, four and one-half inches, subsequently lengthened, exposed the abdominal cavity. A semi-solid mass as large as an adult head, involving the left ovary, and cancerous in its character, and without any pedicle, was shelled out of its bed of universal pelvic adhesions. For a moment or two there was a perfect deluge of blood, which was arrested by sponge packing and hot water and the application of a few lock-handled forceps. The tumor had been stripped off the body of the uterus also. The uterus was larger than normal and was now separated from the bladder and rectum from above downwards, the uterine arteries be-

ing ligated in progress until the vaginal attachment of the cervix was reached. This was divided with the scissors and the entire uterus was lifted out.

Result. The patient died forty-nine hours later from shock, occasioned by the great loss of blood.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 68. In consultation with Drs. R. S. and Addison Wallace, East Brady, Pa. A large mass has developed in the right side of the patient's abdominal cavity, extending from the costal border to the crest of the ileum and both inwards and downwards toward the median line and Pouparts ligament. Fluctuation can be detected in the dull area. The patient is septic, temperature is ranging around 103 and the pulse around 130. There have been repeated chills, followed by heavy sweats. The diagnosis of suppurating kidney is arrived at, all concurring.

OPERATION, JULY 31, 1891. A short central incision exposed the abdominal cavity sufficiently to admit a further investigation. Pus was found free in the pelvic cavity. Several loops of intestine were adherent to one another, the result of previous attacks of peritonitis. The incision was extended above the umbilicus. It was clear that pus was finding its way from the abscess sac into the abdominal cavity, but no opening was discernible. Some flat sponges were passed into the lower abdomen. The ascending colon was displaced toward the median line; the abscess was distending the ascending meso-colon, the posterior plane of which was now slit up, releasing a large quantity of pus. Through the opening in the meso-colon a large cancerous kidney was drawn out. The vessels entering it were tied off en-masse and the kidney removed. The cavity was flushed out with hot water, the opening in the meso-colon was closed by silk sutures. The abdominal cavity was flushed

out with hot water, sponged dry, and the wound was closed by interrupted silk worm gut sutures. Prognosis, fatal.

Note. The diagnosis of suppurating kidney, in which all agreed, was close enough for all practical purposes, and probably as close as it could be made. The second step, namely, a short central incision in the median line, to verify the diagnosis, was also all right, and as free pus and peritonitis were present in the abdominal cavity, the trans-peritoneal nephrectomy which followed was not increasing the patient's chances of dissolution. But had there been no pus in the peritoneal cavity it would have been proper to have closed the abdominal wound and to have made a new wound as follows: An oblique incision extending from the outer border of the sacro-lumbalis muscle an inch below the twelfth rib, extending downward and forward parallel with the rib a distance of four or five inches, and laying open the sac in almost its entire length, would have been proper and given ample opportunity for the complete evacuation of the cyst and removal of the diseased kidney with a better surgical technique. There is certainly no excuse in these latter days (1900) for trans-peritoneal nephrectomy. But ten years ago, when this operation was done, whatever the general knowledge of surgeons may have been, my own knowledge of the subject, based upon experience, was very limited.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 44. Referred by Dr. Lawson. Repeated attacks of peritonitis, abdomen at present contains a large quantity of ascitic fluid and a well-defined tumor as large as a cocoanut in the left inguinal region. Patient has been repeatedly tapped, last tapping having been done five days ago, when thirteen quarts of ascitic fluid were removed. Diagnosis, cancer of the ovaries and peritoneum. Opinion expressed that an operation would be of no benefit. The friends of the patient were, however, not yet satisfied, and it was agreed to make an exploratory incision.

OPERATION, AUGUST 1, 1891. In the presence of Drs. Lawson, Hunt, Balmer, McKnight and Williamson, I made a short central incision, and through this demonstrated the existence of an ovarian cyst on the left side about as large as a cocoanut, cancer of the peritoneum, and cancer of the omentum. A large quantity of ascitic fluid escaped through the wound, which was closed with interrupted silk worm gut sutures.

Note. This case was one of those occasionally met with, in which a radical operation could not have been done at any time without a return of the disease.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 35. Multipara. Long standing or chronic pelvic inflammation. Ovaries and tubes adherent. Present, Drs. Stone and Gillette.

OPERATION, SEPTEMBER 3, 1891. Short central incision, separation of adhesions by fingers, withdrawal of the ovary and tube of each side, ligation of pedicle with silk, division with the Pacquelin cautery, closure of wound with interrupted silk worm gut sutures. Time, thirteen minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 56. A gradually-developing multilocular ovarian cyst, now very large. Present, Drs. Williamson, Stone, Hay, Riggs, McGraw and Gillette.

OPERATION, SEPTEMBER 5, 1891. Four and one-half inch central incision, two large cysts opened with Spencer Wells trocar, separation of slight adhesions, delivery of the cysts, ligation and division of the pedicle, removal of sponges from the pelvic and abdominal cavity, closure of the wound by interrupted silk worm gut sutures. Time, twenty-three minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 32. Multilocular ovarian cyst. Patient's abdomen large. Fluctuation very distinct. Present, Drs. Stone, Henry, McDonald, McGrew and Williamson.

OPERATION, SEPTEMBER 12, 1891. Three and one-half inch central incision, upper large cyst tapped with Spencer Wells trocar, delivered as emptied, slight omental adhesions being separated by the fingers, remaining cysts following out untapped, pedicle ligated and divided, two or three flat sponges introduced into the pelvis and lower abdomen, silk worm gut sutures passed, ends caught in hemostatic forceps, sutures divided by the fingers in the wound, one-half being pushed toward the upper angle, the other toward the lower angle of the wound, flat sponges in the cavity extracted, sutures tied. Time, nineteen minutes.

Result. Recovered.

Mrs. —, aged 44. A rapidly-growing multilocular ovarian cyst, abdomen large and health broken. Present, Prof. Ethridge, Chicago, Ill., Stone, Ewing and others.

OPERATION, OCTOBER 8, 1891. Central incision, four and one-half inches, omental and parietal adhesions broken up with the hand. Ligation of some omental vessels. Pedicle short and thick grasped in Baker-Brown's clamp, and burnt off with the hot iron close to the clamp, thus cooking the section of the pedicle within the grasp of the clamp. Clamp and sponges removed, wound closed with interrupted silk worm gut sutures. Time, thirty-five minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 25. Recurrent pelvic peritonitis. Difficult locomotion, pain almost constant. Invalid. Present, Drs. Williamson, Stone and Moore.

OPERATION, NOVEMBER 5, 1891. Two inch central incision, extraction and ligation of appendages on both sides. Hard rubber tube introduced and pelvis irrigated with hot water, wound closed with interrupted silk worm gut sutures. Time, fifteen minutes.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 41. Large, interstitial, cystic fibro-myoma. Patient's mental condition much disturbed during the last few months. Present, Drs. Williamson, Stone, Gabriel and Hopkins.

OPERATION, DECEMBER 6, 1891. Unusually long central incision, exposing the tumor. Separation of omental and parietal adhesions with the hand. Emptying a large cyst cavity with the trocar. Ligation and division of the broad ligaments. Withdrawal of the tumor through the wound. Application of a rubber ligature around the base of the fundus uteri. Amputation of the uterus above the elastic ligature, supported by hysterectomy pins. Pelvis and lower abdomen filled with flat sponges. Stump of pedicle trimmed down and mummified. Removal of sponges from the peritoneal cavity. A clean flat sponge placed beneath the abdominal wound. Peritoneum of the incision surrounding the stump, stitched to the stump. Wound closed down to the stump, after removal of the protecting sponge, with interrupted silk worm gut sutures. Wound and stump covered with aristol and ordinary super-dressing. Tumor, and fluid withdrawn from it, weighed fifteen pounds.

Result. The patient made slow but satisfactory recovery. Her mental condition being aggravated, and she remained in this condition during the following year, eventually recovering.

OVARIOTOMY.

Mrs. — aged 42. The patient has been in ill health for a long time, looks very badly; bed-ridden. Has an aggra-

vated, chronic cystitis. The urine is loaded with detritus and alive with bacteria. It contains pus and casts. Prognosis, unfavorable. A very large multilocular cyst occupies the abdominal cavity. Present, Drs. Williamson, Stone and Potts.

OPERATION, DECEMBER 22, 1891. A free central incision exposed the tumor and also the fact that an extensive peritonitis was present. Several cysts were tapped, adhesions to several loops of intestine and omentum were separated, some vessels ligated, and the cysts drawn through the wound. The base of the cyst was implanted in the broad ligament and pelvis, and shelled out with great difficulty, followed by free hemorrhage. Several bleeding points were secured by lock-handled forceps, and hot sponges were packed into the bottom of the pelvis. Later the persistent oozing was arrested by pushing down into the pelvis on to the bleeding surface a piece of gauze saturated with a solution of per chloride of iron in glycerine, a preparation which was always kept on hand in the operating room, the use of which I learned from Dr. Thomas Keith. After withdrawal of the gauze and the hemostatic forceps, fresh sponges were packed into the pelvis and lower abdomen. Interrupted silk worm gut sutures were then passed through the wound, the ends secured by hemostatic forceps on either side. The untied sutures were separated in the wound and the sponges withdrawn. The sutures were then tied, closing the wound, which was protected by a covering of iodoform and boracic acid. Time occupied, thirty minutes.

Result. The patient had a wretched time with her bladder, which was frequently irrigated with solutions of boric and salicylic acids. After the close of the third week small patches of organized tissue were passed with the urine. Irrigation was faithfully kept up from day to day, and on the twenty-seventh day after operation, after dilating the urethra, I extracted from the bladder with the forceps a large quantity of broken down

mucous membrane and exudate, the former a complete cast of a portion of the bladder. Daily irrigation was persevered with. On the fortieth day after operation daily irrigation of the bladder was discontinued and the patient was returned home. Three months later she was apparently restored to good health. This was one of the most remarkable recoveries from a complicated case that I have ever seen.

OVARIOTOMY.

Mrs —, aged 62. During the last two years has developed a large multilocular ovarian cyst. During the last week her abdomen has become quite tender, her temperature has risen, and her pulse has increased in frequency. She is now confined to bed. Present, Drs. Williamson, Stone and Manchester.

OPERATION, JANURAY 10, 1892. Abdomen very large. Free central incision, separation of fresh omental and intestinal adhesions with the hand, evacuation of very large cyst with the trocar, withdrawal of collapsed cyst, and a mass, full of small cysts, through the wound. The pedicle is found twisted three and one-half turns, it being long. The cyst wall has lost its pearly, glistening appearance and is dark and almost black at some points. The evacuated fluid contained much disintegrated blood corpuscles. Pedicle untwisted, ligated as far back as possible, divided with the scissors, and dropped. A slow form of peritonitis had been in existence for some days, and Nature was making the ordinary effort to save the life of the tumor by attaching it to the peritoneum by adhesions. The abdominal cavity was well flushed out with hot water, and the wound was closed with interrupted silk worm gut sutures.

Result. Recovery.

Note. There being no Pacquelin at hand, the pedicle was not burnt.

Mrs. —, aged 21. A rapidly-growing multilocular ovarian cyst. Well defined peritonitis present. Patient has been

suffering great pain. The temperature is 100, pulse ranging from 120 to 130. Present, Drs. Williamson, Stone, Hobbs and Hileman.

OPERATION, JANUARY 14, 1892. Four inch central incision. Peritonitis present, fresh adhesions easily separated with the hand, between the cyst and omentum and cyst and the intestines. Cyst reduced with the trocar, and delivered. Pedicle found twisted; ligated with silk ligature and divided with the Pacquelin cautery. Cavity flushed out with hot water, and drained, from the lower angle of the wound, with glass tube, for twenty-seven hours. Immediate closure of the abdominal wound down to the drain tube, with interrupted silk worm gut sutures. During the subsequent twenty-seven hours, twenty-seven fluid ounces of heavy, bloody serum were evacuated by the tube.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 31. Dysmenorrhea, dyspareunia, recurrent pelvic peritonitis. Vag. Exam. great tenderness, an abnormal fullness above the vaginal vault. Present, Drs. Williamson, Stone, Gabriel and Bell.

OPERATION, JANUARY 28, 1892. Trendelenburg's posture. Short central incision. An unusually large omentum was found adherent to both tubes, and also to the pelvic wall. This was released by the fingers, a few fine silk ligatures were applied, and small ragged ends of omentum were cut away. The ovaries and tubes were found adherent in the pelvis, and were separated by the fingers, following the planes of cleavage. The appendages were in turn drawn into the incision, ligated and removed. The pelvis was sponged out, the wound closed by interrupted silk worm gut sutures. Time occupied, thirty-three minutes.

Result. Recovered.

Note. This was my first experience with the Trendelenburg posture, and the time consumed in such an operation was much longer than usual. The position was attained by placing the patient on an ordinary wooden wash bench, with one end elevated, her fore limbs hanging over the end of the bench.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 30. The first and only labor ten years ago, has never been well since. Has menorrhagia, severe dysmenorrhea, almost constant pain and temperature is above normal. Present, Drs. Williamson, Stone, Gabriel, Duncan and Hileman.

OPERATION, FEBRUARY 1, 1892. Short central incision, separation and removal of ovary and pus tube on the left side, and adherent ovary and tube on the right side. Pelvis flushed out, wound closed with interrupted silk worm gut sutures. Patient on flat table. Time, twenty minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 30. Sterile. Multilocular ovarian cyst, very large abdomen. Recently felt a distinct movement in the cyst, which was followed immediately by pain and continuous elevation of temperature. Present, Drs. Williamson, Stone, Gabriel, Mattison and Murdock.

OPERATION, FEBRUARY 4, 1892. Very fat abdominal wall. Free central incision, narrowing in length toward the peritoneum. Detachment of omentum from the cyst, cysts reduced with the trocar and drawn out of the abdominal cavity, pedicle found twisted, ligated, and divided with the Pacquelin cautery. At the moment the cavity of the abdomen was opened, some free fluid escaped; and there were other evidences of a slight peritonitis. The cavity was irrigated with hot water and the wound closed as usual.

Result. Recovered.

Note. Thirteen months after this operation she was delivered at term of her first child,

OVARIOTOMY.

Miss —, aged 46. Large multilocular, ovarian cyst, has been tapped. Patient's general condition very bad. Present, Drs. Williamson, Stone, McElroy, McCarrell, Larimer and Burroughs.

OPERATION, FEBRUARY 24, 1892. Central incision, separation of very slight adhesions with the hand, reduction of cysts with the trocar. Cysts drawn out, pedicle found twisted; ligated and divided. Cavity flushed out with hot water, sponged dry, wound closed in layers with catgut sutures.

Result. Recovered.

Note. I met this patient seven years later in excellent health.

Miss —, aged 32. Multilocular ovarian cyst. Present, Drs. Rodgers, Stone and Conner.

OPERATION, MARCH 1, 1892. Central incision, reduction of cysts with the trocar, separation of slight adhesions, withdrawal of the cysts, ligation and division of the pedicle. Pitcher of hot water poured into the pelvis, sponged out and wound closed.

Result. Recovered.

SALPINGO-OÖPHORECTOMY, WITH ANTERIOR FIXATION OF THE UTERUS.

Mrs. —, aged 26. Has procidentia uteri, but no lacerations. Present, Drs. Stone, Rodgers, Wood and Dean.

OPERATION, MARCH 3, 1892. Short, central incision, uterine appendages found diseased and removed. Anterior fixation of the uterus made with silk sutures. Wound closed with interrupted silk sutures.

Result. Patient recovered and present condition was satisfactory. Reappeared at the hospital November 5 following,

perfectly well with the exception of a small hernia at the site of the former wound, which was reopened, a small piece of the omentum protruding and adherent at the margin of the wound, was ligated in sections and cut away. The tissues along the margin of the wound were dissected back toward the receding aponeurosis, and closed with step sutures. The fundus of the uterus was found firmly adherent to the ventral wall.

Result. Recovered, and two years later was reported to have a small hernia.

OVARIOTOMY.

Mrs. —, aged 30. Diagnosis of ovarian cyst made by Dr. Batten some time ago. Patient has suffered a great deal of pain, and discomfort, both of which are increasing, and her general health is giving way. Present, Drs. Williamson, Stone, Batten, and Dr. Jos. Eastman, Indianapolis.

OPERATION, MARCH 7, 1892. Trendelenburg posture on wash bench, end elevated. Four inch central incision. Upper cyst of the tumor emptied with the trocar. The base of the tumor was intra-ligamentous and shelled out of its bed. The other ovary was found diseased and removed. Cavity was sponged out, and the wound closed with interrupted silk worm gut sutures. Time, twenty minutes.

Result. Recovered.

LAPAROTOMY.

Mrs. —, aged 62. About the sixth of March, 1892, I was called to a neighboring town to see in consultation with an experienced physician, the subject of this report. At the hotel in the village, he informed me that the patient whom I had been called to see with him, was the subject of an "adominal pregnancy." I listened to his history of the case, including the statement that she was sixty-two years

of age. I then said to him, that he was certainly mistaken in his diagnosis, with which opinion, he did not agree. Within an hour we had examined the patient at her own home, and in the parlor of the residence, after the examination, I assured him that his patient was not only not pregnant, but that her abdomen was full of ascitic fluid, and that both ovaries, each of which was as large as a child's head, were cancerous, and that owing to the patient's extremely feeble and emaciated condition, I would advise against an operation. He refused to abandon his former opinion, in the presence of the husband, a few minutes later. We separated, I returning home. A few days later, I received a letter from the husband, standing by the opinion of his family physician, and requesting me to operate upon his wife. On the morning of March 10, with the gentlemen named, we met at the house of the patient, and made preparations to open the patient's abdomen. She was anesthetized in the bed in which we found her, and carried into the adjoining room, and placed upon the table. The abdomen was exposed, and I stated to the gentlemen present, my opinion concerning the case, and turning to the family physician, said that it was not too late yet, to abandon the operation. He stepped to the door of the adjoining room, opened it, and the husband entered. They both insisted that the operation go on. Present, Dr. W. L. Stone, and others.

OPERATION, MARCH 10, 1892. A rubber sheet was thrown over the patient's extremities, drawn up closely around the pubic bar and pelvis, under the large and distended abdomen, the length of the sheet formed a trough, leading to a tub placed at the foot of the table. A central incision permitted a free and rapid flow of nearly forty pints of ascitic fluid into the tub. Considerable more was sponged out. On one side a large cancerous ovary, weighing not less than three or four pounds

was removed. A similar one not quite so large was removed from the opposite side. Patches of cancerous infiltration also existed in the peritoneum. Some hot water was poured into the cavity which was sponged out, and the wound was closed and the patient put to bed.

Result. Patient died forty hours later of exhaustion.

OVARIOTOMY.

Mrs. —, aged 55. Patient has a very large multilocular ovarian cyst. Present, Drs. Stone, Rodgers, and Wood.

OPERATION, MARCH 26, 1892. A long central incision, followed by reduction of two large cysts with the trocar, and delivery of an enormous mass, containing innumerable small cysts, brought the pedicle within easy reach. This was securely ligated, and divided with the Pacquelin cautery. The pelvis was washed out with hot water, sponged dry and the wound was closed with interrupted sutures. The cysts weighed sixteen pounds and it was estimated thirty-two pints of fluid had been evacuated with the trocar.

Result. Patient did well until the end of the fifth day, when vomiting set in, and on the sixth day, she was vomiting fecal matter, and there was considerable distension, which was not relieved by high enemata of soap suds and turpentine, through a long rectal tube. I made a short incision in the left iliac region, and attached by suturing, a loop of intestine presenting, to the margins of the wound. Considerable gas escaped upon opening the intestine already stitched in the wound. The vomiting ceased at once and did not return again, and the patient improved for the next two days, after which a peritonitis set in, from which she died the fourteenth day after the operation.

Autopsy. The lower end of the ileum, the caput coli and a portion of the ascending colon, were found to be gangrenous.

The nutrient vessels supplying this portion of the intestinal tract, were found blocked with thrombi.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 19. Former specific infection. Appendages adherent, result of pelvic peritonitis, following salpingitis and ovaritis. Present, Drs. Stone, Rodgers and Wood.

OPERATION, MARCH 26, 1892. Short central incision, adhesions broken up with the fingers, appendages on both sides removed, wound closed with interrupted sutures.

Result. Recovered.

LAPAROTOMY FOR VENTRAL HERNIA.

Miss —, aged 33. Operated upon one year ago by Dr. Joseph Price, for removal of diseased uterine appendages. Has had two subsequent operations for the cure of ventral hernia, which still exists. Present, Drs. Stone, Rogers and Wood.

OPERATION, MARCH 26, 1892. The old wound was opened, and the edge of the abdominal aponeurosis sought for by dissection, and the wound was reclosed with buried silk worm gut suture. The immediate result of the operation was good, and for several months there was no return of the hernia, after which I lost sight of the patient and I do not know whether the result was permanent or not.

Note. This was the third laparotomy done this morning.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 32. Multipara. Has suffered for a long time, several years, with dysmenorrhea and backache. On both sides of the uterus a painful mass is located.

OPERATION, APRIL 13, 1892. Central incision and enucleation by the fingers, from dense adhesions, the ovaries and

tubes on both sides. They were extracted, the pedicles ligated and divided with the Pacquelin cautery. The operation was difficult, tedious and hemorrhagic, lasting an hour and twenty minutes.

Result. Recovered.

Note. The ovaries were about as large as oranges, and the entire surface of both of them was raw and rough, the surfaces looking somewhat as if they had been covered over with a thin, rough layer of bloody waste, or finely chopped lint. When cut open they were both found filled with blood clots. The tubes were thick and very firm, showing a chronic, interstitial salpingitis.

OVARIOTOMY.

Miss —, aged 32, A hard working country lass. Health began failing three years ago. Almost constant suffering referable to the pelvis, has been present. Some months ago, some pus was evacuated by the rectum. A distinct tumor can be felt in her right groin, extending about half way to the umbilicus, and inwards to the median line. Her general appearance is that of one who has suffered a great deal, she is very thin and weak. Present, Drs. Stone and Rodgers.

OPERATION, APRIL 15, 1892. A central incision exposed the abdominal cavity. A quantity of ascitic fluid escaped from the wound. The peritoneum was more vascular than is usual. The tumor was adherent to the pelvic wall and floor. With the fingers it was carefully separated from both, and drawn through the incision, lengthened. Its pedicle, consisting of the meso-ovarium was ligated and divided with the Pacquelin cautery. The tube was not involved in the disease and was left behind. The pelvis was flushed out with hot water, which was sponged out. Some hot sponges were packed into the pelvis and interrupted silk worm gut sutures were passed

through the wound, their end being secured by hemostatic forceps. They were drawn apart between the lips of the wound, and the sponges were removed. There was still some oozing in the pelvis. A long glass drain tube was left in the lower angle of the wound. The wound closed. The drain tube was removed at the end of thirty hours, and the patient made an uninterrupted recovery.

Note. The specimen removed consisted of degenerated ovarian tissues and when bisected, discharged a pint of pus, tubercular in its macroscopic appearance. The left ovary was examined before the wound was closed, and considered normal. Here again arises the question of leaving the second ovary, when its mate has become tubercular, and the subject of operation. That the second ovary should have been removed, notwithstanding its healthy appearance, the subsequent history of this case will prove.

The patient returned on June 3, 1892, with a repetition of the former symptoms, with the exception of the fact that the left ovary was only about one-half the size of the one which had been removed, and her condition was better than prior to the first operation. On June 3, seven weeks after the first operation she was again anesthetized.

OPERATION. Present, Drs. Stone and Rogers. Incision in the line of former wound, ovary freed from pelvic adhesions with the fingers, drawn up, its pedicle ligated, and divided with the cautery, tube not involved in the disease. There was some ascitic fluid present, and the peritoneum presents the same hyperaemic appearance, as at the first operation. The cavity was thoroughly flushed out with hot water, and at the end, some hot water was left in the cavity and the wound closed. No drainage this time.

Result. Prompt recovery from the operation.

Subsequent History. Within a year this patient was in robust health. I saw her seventeen months after the last operation,

she was in perfect health and doing her share of all the labor of a country home. She is still living and well, more than eight years after her operations.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 29. Multipara. Last child born nineteen months ago. A large, tender mass occupies Douglass' pouch, displacing the uterus forward and to the left side. She has severe menorrhagia, metrorrhagia and a great deal of pain. General condition thin and debilitated. Present Drs. Stone, Rodgers, Huselton and others.

OPERATION, APRIL 26, 1892. Free central incision, separation with the fingers of the mass in the pelvis, which was drawn into the wound. A silk ligature was passed through the upper portion of the broad ligament, outside of the ovary, and firmly tied, securing the ovarian artery. A second ligature was passed through the broad ligament and tied over the tube, close to the horn of the uterus. The tube and ovary were then cut away. The opposite ovary and the tube were found diseased and adherent, they were drawn out. After separation of the adhesions by the fingers, the pedicle was ligated with silk and divided. Pelvis was flushed out with hot water, poured in from a pitcher, sponged out, and the wound closed.

Result. Recovered.

Note. The right tube contained the remains of a tubal gestation.

OVARIOTOMY.

Mrs. —, aged between 71 and 72 years. Has a very large multilocular ovarian cyst. A thin faced, nervous old lady, with unbounded faith in the doctor and the Lord. Present, Drs. Rogers, Stone and Gladden.

OPERATION, MAY 5, 1892. A long central incision, hand introduced and some slight omental, intestinal and parietal ad-

hesions broken up. Reduction of the cysts with very large trocar, that of Spencer Wells, delivery of the entire collapsed mass, ligation, and division of the pedicle with the Pacquelin cautery. Pitcher of hot water poured into the pelvis and sponged out, wound closed with interrupted silk worm gut sutures.

Result. Uninterrupted recovery.

Note. December 11th, 1900. This patient is still living at eighty years of age, and takes part in the light housekeeping of her home.

OVARIOTOMY.

Mrs.——, aged 45. Multipara. Has a large multilocular ovarian cyst. Present, Drs. Stone, Shenkle and Connor.

OPERATION, MAY 7, 1892. Free central incision, no adhesions. Cysts reduced with the trocar, mass drawn out. The pedicle was unusually broad, probably all of five inches, it was ligated in sections and divided. Pelvis was sponged out, and the wound closed.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs.——, aged 26. Chronic ovaritis and salpingitis. Present, Drs. Stone, Windsor, Wallace and Smith.

OPERATION, MAY 9, 1892. Ovaries and tubes found adherent, separated with the fingers, drawn out, pedicles ligated and divided. Wound closed. Time, twenty minutes.

Result. Recovered.

ANTERIOR FIXATION OF THE UTERUS.

Mrs.——, aged 44. Multipara. Recently thrown from a carriage, sustaining a retroversion of the uterus, followed by hysteria and invalidism. Present, Drs. Stone and Rodgers.

OPERATION, MAY 14, 1892. Very short central incision, ending at the reflection of the bladder. The fundus of the uterus brought up and sustained with a pair of small vulsellum forceps. The fundus was fixed as low down as possible to the anterior abdominal wall, by the insertion of one deep silk worm gut suture, and two silk sutures, all buried. Wound closed with two or three interrupted silk worm gut sutures. Time, fifteen minutes.

Result. Patient recovered and was relieved of former symptoms.

Note. My first knowledge of ventral fixation of the uterus, occurred in 1882, in conversation with Dr. Thomas Keith, of Edinburgh, who had practiced it in the course of some of his laparotomies. I did it for the first time on February 2, 1884. The operation has been very much improved by Dr. Howard Kelly, of Baltimore. The improvement consisting of the application of the posterior surface of the fundus to the abdominal wall. Since the publication of his improvement, I have followed it, using sometimes buried silk worm gut suture; at other times, catgut or kangaroo tendon. In my own cases of anterior fixation of the uterus, I have never heard of any subsequent trouble, in subsequent labors, a number of which have occurred. But I have not been able to follow the history of all the cases.

SALPINGO-OÖPHORECTOMY.

Mrs.—, aged 32. The first and only confinement was very difficult. Her cervix and perineum were lacerated, and subsequently well repaired. The uterus remains retroverted, and both ovaries are enlarged and prolapsed. She is a nervous wreck. Present, Drs, Stone, Rodgers and Johnson.

OPERATION, MAY 24, 1892. Very short central incision,

appendages removed as usual, anterior fixation of the uterus. Wound closed. Pathology, chronic salpingitis and ovaritis.

Result. Recovered, health restored.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 22. Housemaid. Unable to be out of bed during menstrual periods. Incapacitated for work. Ovaries adherent. Present, Drs. Rodgers, Dunlevy and Jones.

OPERATION, MAY 28, 1892. Short central incision, adhesions broken up with the fingers, appendages on both sides removed.

Result. Recovered, returned to work, was last heard of six months after the operation, when she was menstruating regularly, and more freely than prior to operation.

Note. Mr. Lawson Tait, during the three months which I spent with him in Birmingham, Eng., told me that about four cases in one hundred in his experience, continued to menstruate after removal of the appendages. It was this fact recurring in the experience of Pean, the recurrences, not necessarily in the same proportion, which led him to adopt pan-hysterectomy, instead of salpingo-oöphorectomy. And many cases following this will show that eventually I adopted pan-hysterectomy in cases in which there was a markedly menorrhagic condition, and a well grounded belief in incurable infection of the endometrium, and especially in cases where it was clear that the husband of the patient was not pure.

Miss —, aged 23. One child at sixteen years of age. Has had menstrual epilepsy for seven years. Has chronic disease of both ovaries and tubes. Present, Drs. Rodgers, Dunlevy and Grant.

OPERATION, JUNE 1, 1892. Short incision, and removal of adherent appendages on both sides.

Result. Recovery, with great improvement to her general health. Patient entirely lost sight of.

CHOLECYSTOTOMY.

Mrs. —, aged 55. Multipara. French nationality, does not understand English. Abdomen somewhat distended. Some tenderness exists below the right costal border. In the region of the gall bladder the latter can be made out as distended. Present, Drs. Rodgers, Stone, Mowry, Wireback, and others.

OPERATION, JUNE 10, 1892. An incision four inches in length, was made parallel with the outer edge of the right rectus muscle, exposing the gall bladder much distended. An aspirator needle was introduced into the dome of the gall bladder and a quantity of fluid was withdrawn. Protecting flat sponges were placed around its base, protecting the intestines, the dome of the relaxed gall bladder was now opened, and seventy-one biliary calculi were extracted from the gall bladder and cystic duct. The incised end of the gall bladder was stitched to the peritoneum and fascia at the upper end of the abdominal wound, and a rubber drain tube was inserted into the gall bladder. The sponges were removed and the remainder of the wound was closed with interrupted silk worm gut sutures.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 40. Multipara. Has been suffering great pain, has had repeated chills, a large fluctuating mass in pelvis and lower abdomen. Large German woman. Present, Drs. Rodgers, Stone and Joseph Taber Johnson, of Washington, D. C.

OPERATION, JUNE 11, 1892. Long central incision, exposing cavity of the abdomen and enormous pus tubes on both sides. Patient in Trendelenburg's posture. The tubes were extensively adherent, but with the fingers, carefully disconnected and successfully removed. There was more than a pint of pus in each

tube. The pedicles were ligated and divided, the pelvis was flushed out with hot water and the wound closed.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 22. Pelvic pain, dysmenorrhea, menorrhagia, dyspareunia. Mass felt to right of uterus. Present, Drs. Stone, Rodgers and McGrew.

OPERATION, JUNE 12, 1892. Short incision, adhesions broken up with the fingers, appendages on both sides removed, wound closed.

Result. Recovered.

Note. Chronic interstitial salpingitis on both sides. Left ovary small and cirrhotic, right ovary large and cystic.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 22. Sterile. Pelvic pain. Dysmenorrhea, dyspareunia, menorrhagia. Present, Drs. Stone, Rodgers and Joseph Taber Johnson, of Washington, D. C.

OPERATION, JUNE 12, 1892. I requested Dr. Johnson after the patient was etherized, to do the operation and I assisted him. Short central incision, adhesions broken up with the fingers, appendages removed from both sides, after ligation of the pedicles. Wound closed with interrupted silk worm gut sutures. Time occupied, fifteen minutes.

Result. Uneventful recovery.

Note. Chronic salpingitis on both sides. Left ovary large and cystic, right ovary small and cirrhotic.

NEPHRORRHAPHY.

Miss —, aged 32. The patient has been bed-ridden most of the time for many months, and has repeated attacks of colic. Recently I saw her in a distant part of the country,

in consultation with her physician, and diagnosed a floating kidney. Present, Drs. Stone and Rodgers.

OPERATION, JUNE 15, 1892. The patient was placed upon her left side, resting upon a pillow, wrapped up in a sterilized rubber sheet. An oblique incision five inches in length was made, extending from the lateral border of the erector-spinae muscle, close to the twelfth rib, extending downward and forward, almost parallel with the quadratis-lumborum. The incision divided the skin, the fat layer, a portion of the latissimus-dorsi muscle, the external and internal oblique and transversalis muscle; upon division of the lumbo-dorsalis fascia, the sub-peritoneal fat layer was exposed. A few hemostatic forceps were applied upon bleeding vessels as the incision progressed. The sub-renal fat and capsule were opened by blunt dissection, and the kidney was brought into the wound, where it was stitched to the facial margins of the wound, as high up as possible, with silk worm gut sutures. A drain consisting of six or eight strands of silk worm gut were laid in the bottom of the wound, which was closed with interrupted silk worm gut sutures.

Result. There was slight suppuration of the wound, which entirely healed at the end of three weeks, the patient returning home with instructions as to immediate future care. She married within a year, after which time I have no knowledge of her.

OVARIOTOMY.

Mrs. —, aged 32. Pelvic pain, dysuria, loss of flesh and invalidism. A semi-solid mass fills the pelvis. Present, Drs. Stone, Rodgers and McGrew.

OPERATION, JUNE 17, 1892. Free median incision. A multilocular ovarian cyst springing from the right ovary, completely filled the pelvis, in which it was incarcerated by reason of extensive adhesions. It was completely shelled out with the

fingers, reduced with the trocar drawn through the wound, its pedicle ligated and divided. The left ovary and tube were found adherent, separated and removed. The pelvis was sponged out with hot water, and the wound closed with interrupted silk worm gut sutures.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 33. Has been in bad health for several years. Has a multilocular ovarian cyst, reaching above the umbilicus. Present, Drs. Stone and Rodgers.

OPERATION, JUNE 18, 1892. Median incision, separation of slight adhesions with the hand, reduction of the cysts with the trocar, delivery of the tumor, ligation and division of the pedicle with the Pacquelin cautery, pelvis flushed out and wound closed. The tumor contained dermoid elements, hair, bone and teeth.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 34. Married five years ago, sterile. Healthy at time of marriage. Soon after marriage dysmenorrhea, leucorrhea, pelvic discomfort. Later, dysuria, severe back-ache, pain in both iliac regions, dyspareunia, menorrhagia. The oft told story of the pure girl who has married a man who has been the subject of supposedly cured, previously existing gonorrhea. Present, Drs. Stone, Rodgers and McGrew.

OPERATION, JUNE 18, 1892. Central incision, separation of adherent pus tubes on both sides, ligation of the pedicles, and removal of the appendages, namely: the pus sacs and ovaries.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 29. One child seven years ago, since which time patient's health has been declining. Pelvic examina-

tion discloses a cyst in the pelvis, extending above the pelvic brim. Present, Drs. Rodgers, Stone, McGrew, Corbus and Dunlevy.

OPERATION, JUNE 27, 1892. Trendelenburg posture. Central incision, introduction of a flat sponge over receding small intestines. Reduction of cyst with Tait's trocar. Difficult and tedious and bloody enucleation of the cyst from the broad ligament. Application of several pairs of hemostatic forceps to bleeding vessels. The liberated cyst was drawn out, and with the right tube was ligated at the horn of the uterus, and cut away. Vessels in the grasp of the hemostatic forceps twisted by rotating the forceps several times before releasing them. The pelvis having been subjected to hot sponge packing. Edges of the broad ligament were sutured with cat gut. Careful cleansing of the peritoneal cavity by flushing with hot water, the patient having been lowered to the ordinary position. The left ovary and tube were not removed.

Result. Recovered.

SALPINGO-OÖPHORECTOMY WITH ANTERIOR FIXATION.

Mrs.—, aged 42. Multipara. Last labor five years ago partial procedentia uteri, menorrhagia. Lacerated cervix and introitus vaginae. Present, Drs. Rodgers, Stone, Baumgarner, Dunlevy, Corbus and McGrew.

OPERATION, JUNE 28, 1892. Trendelenburg posture. Both ovaries found enlarged, containing large blood clots, tubes hyperaemic. Appendages on both sides removed as usual, fundus of the uterus fixed at and below the lower angle of the wound with two buried silk worm gut sutures. Pelvis sponged out, wound closed.

Result. Recovered.

Note. In this case it will be observed that lacerations of the cervix and introitus vagina were not repaired. The case did well, but for years past, in similar cases, I have first cur-

etted the uterus, repaired the cervix and done a colporrhaphy, with closure of the laceration at the perinaeum, at the time of a laparotomy.

Future History. Returned November 2, 1892, with the cervix uteri protruding between the labia, and the uterine canal, measuring more than five inches. It was now evident that to the former operations colporrhaphy and the repair of the perinaeum, should have been added. Instead of instituting the procedure at this time, I substituted vaginal extirpation of the uterus.

OPERATION, NOVEMBER 2, 1892. Anesthetic by Dr. Corbus. The fundus of the uterus was found firmly fixed where it had been placed at the first operation. Division between the cervix and vagina was made by a circular incision around the cervix, low down. With a pair of scissors, a lateral incision was made on each side of the uterus through the tissues surrounding the portio-vaginalis, above the circular incision. Blunt dissection with the finger, the cervix being held firmly in the grasp of a vulsellum forceps, exposed the lower portion of the broad ligament on both sides. The ureters were pushed well out of the way, and the portion of the broad ligament, including the uterine artery, was tied with strong silk ligature on each side of the uterus. The uterus was separated from the ligatured sections of the broad ligaments, with the scissors. The peritoneum behind the uterus was opened, additional ligatures were placed upon sections of the broad ligaments as they came down, followed by division with the scissors. The fundus of the uterus adherent to the abdominal wall was reached, and separated with considerable difficulty, and the uterus was removed. There was considerable hemorrhage during the procedure. The pelvis was drained with iodoform gauze.

Result. Recovered.

Note. December 14, 1900. Since the appearance of Dr. E. C. Dudley's work on gynecology, I have adopted, in the treat-

ment of procidentia uteri, his operation known as "Lateral elytrorrhaphy," and I have found it all he claims for it.

SALPINGO-OÖPHORECTOMY.

Miss——, aged 19. Confined at seventeen. Menorrhagia, both ovaries prolapsed, large and tender. Present, Drs. Stone, Rodgers and others.

OPERATION, JUNE 29, 1892. Short central incision, appendages removed on both sides. Chronic ovaritis and salpingitis. Ovaries undergoing cystic degeneration.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs.——, aged 46. Multipara. Has had recurrent attacks of pelvic peritonitis, extending through several years. Recently had serious uterine hemorrhage. Uterus is retroverted and fixed. Appendages very tender. Present, Drs. Rodgers, Stone, Huselton, Dunlevy and Corbus.

OPERATION, JULY 2, 1892. Free central incision. The right ovary was about as large as a turkey egg, and the fimbriated end of the large tube was adherent to it. The mass was firmly adherent to the anterior wall of the fundus uteri. The adhesions were broken up with the fingers; the liberated ovary and tube pulled up, the pedicle ligated and divided. The left ovary and tube, the former about as large as a turkey egg, and the latter much enlarged and adherent to the ovary, were imbedded in a mass of adhesions. The ovary and tube were liberated after tedious dissection with the fingers and removed. The uterus was adherent posteriorly to the pelvic peritoneum. When dragged into the abdominal wound, the sigmoid flexure of the colon came with it. The adhesions between the uterus and sigmoid were separated, and the uterus was free. Some

vessels had been ligated, and some hemostatic forceps applied to bleeding points. There was still considerable oozing. The pelvis was packed full of hot sponges, and the question of disposing of the uterus was taken up; it was raw both on its anterior and posterior surfaces. I passed a hysterectomy pin through it, surrounded it with a rubber ligature, and amputated the fundus. The stump, supported by the hysterectomy pin, was fixed in the lower angle of the wound, the sponges were removed, the pelvis washed out with some hot water, and the wound closed by interrupted silk worm gut sutures.

Result. Uneventful recovery.

Note. Patient restored to excellent health, still living, more than eight years later.

SALPINGO-OÖPHORECTOMY.

Miss——, aged 29. Bi-manual examination, per vaginam, reveals enlargement of both ovaries. Patient has dysmenorrhea, leucorrhea and great sensitiveness to the touch. Present, Drs. Rodgers, Stone and Ewing.

OPERATION, SEPTEMBER 1, 1892. Central incision. Ovaries enlarged and adherent to the fimbriated ends of the tube and the posterior plane of the broad ligament and pelvic floor. Enucleated with the fingers with great difficulty, and free bleeding. Appendages removed from both sides as usual. The pelvis was sponged, packed, unpacked, flushed out with very hot water, which was sponged out, pelvis packed again with hot sponges, silk worm gut sutures passed through the wound and caught at the ends with hemostatic forceps, sutures crossing the wound separated, sponges withdrawn from the pelvis, wound closed. Glass drain tube left in its lower angle.

Result. Recovered.

Note. The drain tube was removed at the end of thirty hours, two ounces of bloody serum having been removed from it prior to its removal.

SALPINGO-OÖPHORECTOMY.

Miss——, aged 35. Former attack of violent pelvic peritonitis, followed afterwards by menorrhagia and metrorrhagia. Chronic invalid. Present, Dr. Rodgers and others.

OPERATION, SEPTEMBER 3, 1892. Central incision. Both ovaries and tubes adherent, prolapsed and the masses adherent to the posterior planes of the broad ligament and the floor of the pelvis. The fundus of the retroverted uterus lying between. The appendages were enucleated by the fingers with great difficulty, and with the loss of considerable blood. The hemorrhage was controlled by hot water and sponge packing. The pelvis was drained for twenty-four hours.

Result. Recovery.

Note. The ovaries were larger than turkey eggs, they were filled with a dark, grumous, bloody ovarian fluid.

EXPLORATORY LAPAROTOMY.

—— ———, aged 49. Patient has enjoyed fair average health until within a couple of years. Following an accident, having been thrown from a wagon, without at the time any appreciable bad results; the patient developed a very prominent abdominal tumor. The spaces bordering upon Poupart's ligaments, the ascending, transverse and descending colon, are all resonant upon percussion. The patient's functions are all well performed, in spite of what is best described as a protuberance, accompanied with considerable pain. As the notes of this case by the hospital resident, are very incomplete, I am obliged to supply them in full from memory. The apex of the tumor was very close to the umbilicus. There was no thrill nor purring sound, nor distinct pulsations in the tumor. The differential diagnosis conducted on the lines of diagnosis by exclusion,

led to the suspicion that the mass was retro-peritoneal, This was made much the more probable by the fact that the mass was firmly localized, being apparently immovable. The case had been referred by Dr. Frank Ross, of Clarion, Pa. Present, Drs. Stone, Rodgers, Baumgarner, Corbus and Dunlevy.

OPERATION, SEPTEMBER 5, 1892. A free central incision was made exposing the abdominal cavity and the dome of the mass, festooned by coils of small intestine. Direct inspection proved the growth to be retro-peritoneal, with a very broad base and pointing at the abdominal wound, and carrying upwards the loops of small intestines, which festooned its walls, which consisted of expanded folds of mesentery. An area clear of intestines at its apex was selected for attack. To this clear space, the contents of the growth having been proven to be liquid, the parietal peritoneum about the incision was carefully stitched, and the peritoneum of the wound above and below, was also sutured, and thus the peritoneal cavity was thoroughly closed and protected. The dome of the cyst was now incised, and a large quantity of thick fluid escaped. The entire quantity of fluid removed from the cyst was three pints. The cyst was entirely emptied by carefully mopping it out, it was then completely filled with squares of iodoform gauze, all of which were removed on the seventh day. This packing was replaced with a loose packing of iodoform gauze squares. Half of this was removed on the ninth day, and the resident was instructed to remove the remainder on the eleventh day, and insert a rubber drain tube in its stead. Through the drain tube the cyst was irrigated with a solution of boracic and salicylic acids, for some time. In the meantime the wound closed around the drain tube, which a little later was removed, and the patient returned home.

Result. The fistulous opening at the site of the drain tube persisted after his return home, in spite of all efforts to close it, on the part of Dr. Ross. He decided to dilate the opening and

explore the interior of the sac. With a pair of long forceps he encountered something, which he seized with the forceps, and drew up to the enlarged fistulous opening. He extracted a large square of iodoform gauze, which the resident failed to discover, before introducing the rubber drain tube. Dr. Ross in his facetious way, wrote me that "he had in his possession, one of our hospital sheets, which he had found in the patient's abdomen." The patient recovered.

SALPINGO-OÖPHORECTOMY.

Mrs.—, aged 26. Has been an invalid for several years, is melancholic. Has menorrhagia, dysmenorrhea. Ovaries enlarged. Present, Drs. Stone and Rodgers.

OPERATION, SEPTEMBER 6, 1892. Central incision, appendages adherent, separated with the fingers, drawn up, and pedicles ligated and divided. Pedicle of the right ovary and tube was so friable that it was cut completely off by traction on the ligature. The amputation by ligature was not followed by bleeding. The cavity of the pelvis was sponged out, and the wound closed with interrupted silk worm gut sutures. Disease probably tubercular.

Result. Recovered, future history good.

Mrs.—, aged 29. First and only labor seven years ago. Three months ago a pelvic abscess discharged through the rectum. Patient suffers constant uneasiness in the pelvis, with frequent attacks of pain. Has severe dysmenorrhea. Owing largely to her forced inactivity she has become enormously fat. Present, Drs. Stone, Rodgers and Kirkpatrick.

OPERATION, SEPTEMBER 7, 1892. A central incision, narrowing from the skin as the peritoneum was approached, exposed the peritoneal cavity. The adherent appendages on

both sides were removed as usual. The ovaries were found much enlarged and cystic, the fimbriated ends of the tubes, grasping the ovaries, and adherent to them. The wound was closed with interrupted silk worm gut sutures.

Result. A stitch hole abscess and an attack of phlebitis, involving the left femoral vein, occurred in the course of her recovery, which was protracted.

Future Result. Twenty-five months later she returned with a small ventral hernia, which had developed at the site of the stitch hole abscess mentioned above.

OPERATION, OCTOBER 3, 1894. The wound was opened up, the edge of the aponeuroses sought for by dissection, and the wound was closed with buried catgut suture, reinforced by transverse interrupted silk worm gut sutures.

Result. Recovery with good union.

TOTAL VAGINAL HYSTERECTOMY.

Mrs.——, aged 36. By her first husband she had one child, nine years ago. At this labor she suffered a bi-lateral laceration of the cervix uteri, for the repair of which no operation was done. Three months ago she married her present or second husband. She now suffers from menorrhagia and metrorrhagia, and extreme pain in sexual intercourse, which is followed by loss of blood. A vaginal examination reveals a large "cauliflower" cancer of the cervix, with a movable uterus, no involvement of the vaginal wall beyond the cervix, and no apparent cancerous disease in any other organs. Present, Drs. Rodgers, Stone, Corbus and Dunlevy.

OPERATION, SEPTEMBER 10, 1892. The patient was placed in the dorsal decubitus, lithotomy position, a Simon's speculum depressed the perineum, and exposed the growth. With a Simon's spoon the fungoid mass, as large as a lemon, was

broken down and removed. The disease was followed wherever it apparently existed, until its removal by the scoop was apparently complete. The vagina was then thoroughly washed out with a 1.4000 sublimate solution, and mopped dry. An incision was now carried around the cervix at the vaginal junction, opening the tissues a little above the vaginal junction. Dragging the uterus down with a pair of vulsellum forceps, with the index finger of the free hand, the tissues were dissected back exposing the uterine attachments of the lower portion of the broad ligaments. On each side of the uterus a pair of lock handled forceps were placed on the broad ligaments, completely securing the uterine arteries. With the scissors, the portion of the ligaments included in the forceps were divided between the forceps and the uterus, as high up as the points of the forceps reached. The peritoneum was now opened both in front and behind the uterus, and remainder of the broad ligaments were clamped off with lock handled forceps and separated with the scissors. Strips of iodoform gauze were passed up between the forceps as high as their tips, the vagina filled with iodoform gauze, a self-retaining catheter was placed in the bladder, and the patient put to bed.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs.——, aged 20. Sharply ante-flexed uterus, dysmenorrhea, dyspareunia, sterile. Present, Drs. Rodgers, Stone, Stybr, Wallace, Beatty and others.

OPERATION, SEPTEMBER 15, 1892. Short central incision, removal of adherent appendages from both sides. Pathology. Chronic ovaritis and salpingitis. Ovaries cystic.

Result. Recovered.

Mrs.——, aged 32. Only child born five years ago. Cervix and introitus vagina lacerated, followed by invalidism.

Cervix and perinaeum repaired, preceded by curettage of the endometrium. The uterus at the time of this operation was found to be in a condition of super-involution. The left ovary is also felt in Douglas' pouch. No abatement of her complaints followed her recovery from these operations, and she was subjected to a prolonged "rest cure," including massage, seclusion and judicious feeding. She gained in flesh and blood, but there was no abatement to her complaint of constant pelvic distress. It was determined to remove her ovaries. Present, Drs. Stone and Rodgers.

OPERATION, SEPTEMBER 21, 1892. Short central incision, some free ascitic fluid found in the pelvis. Doubtless indicative of what has been occurring after each menstrual period for a long time. These attacks of recurrent pelvic peritonitis explain the persistent pelvic pain. The appendages were removed on both sides, slight adhesions having been broken up. There was salpingitis on both sides. One ovary was small and cirrhotic, the other was large and cystic. Time occupied in her operation, ten minutes. *Result.* Recovered.

Subsequent History. For some time after the last operation, the patient improved, gaining in flesh, strength and color. But continued to complain almost constantly of something she could never describe, and always ended up with, "I feel bad." This state of affairs continued for two or three years, when she began to greatly improve. I have seen her within a year, and she is very well, eight years having elapsed since her last operation.

Note. It is a wise precaution in excessively nervous cases in which the ovaries and tubes are to be removed, not to promise immediate relief from the symptoms present in the case, but to say to the patient and her friends, that the patient will not be entirely relieved and restored to health, short of two or possibly three years.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 19. Her only child was born just after she had attained her seventeenth year. Her labor began on Sunday night, and was terminated with the forceps on the following Thursday morning. Notwithstanding this severe labor, and lacerations, she did not break down until more than a year later, when she presented herself with menorrhagia, leucorrhea, dysuria, and intolerable dyspareunia. An examination per vaginam detects a soft mass behind the uterus. Pyo-salpinx. Present, Drs. Rodgers, Stone and others.

OPERATION, SEPTEMBER 24, 1892. Excessively difficult, she had pyo-salpinx on both sides, and the distended tubes, adherent to the enlarged and inflamed ovaries, were all adherent to the posterior planes of the broad ligaments and pelvic floor. After the removal of the ovaries and tubes, two-thirds of the lining of the true pelvis seemed to be raw and oozing blood. The pelvis was sponge packed, flushed out with very hot water, dried out and re-packed, sponges removed and wound closed, with a long glass drain tube resting in its lower angle. The drain tube was removed at the end of twenty-four hours, having been unnecessary. After the operation, the patient was seized with an attack of acute, maniacal hysteria, which lasted, excepting when she was under the influence of hypodermic injections of hydro-bromate of hyoscine, until the third day, upon which her pulse and temperature were both recorded as normal.

Result. Recovered.

Note. A woman had better commit suicide than marry a man who has had a deep gonorrheal infection.

Mrs. —, aged 35. Multipara. Last labor ten years ago. Confined to bed one week out of each month. Menstrual

headaches of great violence, some mental disturbance. Has lost flesh, weighs but seventy pounds. Examination reveals chronic ovaritis and salpingitis. Present Drs. Stone and Rodgers.

OPERATION, SEPTEMBER 29, 1892. Ovaries and tubes removed through a very small central incision, which was closed by interrupted silk worm gut sutures.

Result. Recovered. Future result, excellent.

SALPINGO-OÖPHORECTOMY.

Mrs.—, aged 35. Multipara. History of chronic invalidism, referable to pelvic disease. Has dysmenorrhea, metrorrhagia and menorrhagia. A mass is felt behind and to the right of the uterus. Present, Drs. Rodgers, Stone and others.

OPERATION, OCTOBER 5, 1892. Central incision, separation from adhesions with the fingers of the mass behind and to the right side of the uterus, withdrawal of the mass, consisting of the ovary and distended tube, ligation and division of the pedicle. Left ovary found atrophied and removed, with its tube. Wound closed with silk worm gut sutures. Pathology. The distended right tube was opened and found to contain the remains of an ectopic gestation.

Result. Recovered.

OVARIOTOMY.

Mrs.—, aged 35. Invalidism, referable to pelvic disease. Large mass in the pelvis. Patient shows the effect of prolonged suffering. Has become much emaciated. Present, Drs. Stone, Rodgers and Bell.

OPERATION, OCTOBER 6, 1892. Central incision. The right side of the pelvis is found filled with a mass, adherent about its brim, lateral wall and floor. The mass was friable,

almost caseous, and was shelled out with considerable loss of blood; it was a degenerated ovary. The tube was removed with it, as was also the opposite ovary and tube. The left ovary was small and cirrhotic. The pelvis was washed out with hot water, and sponge packed to control the oozing, which came from extensive raw surfaces. The bleeding having been arrested, and the sponges removed, the wound was closed.

Result. Intestinal obstruction developed inside of forty-eight hours. The wound was opened under chloroform, and loops of intestine, found adherent in the pelvis, were separated, and the wound closed. The patient, however, died a day or two later.

Note. This was the thirtieth patient whom Dr. Bell had referred to me, and upon whom I operated, and this patient was the only one in the thirty who died. The specimen removed was given to Dr. E. G. Matson, now bacteriologist of the City of Pittsburg, for examination. He reported it to be a round-celled sarcoma, consequently the case was hopeless from the beginning.

SALPINGO-OÖPHORECTOMY, APPENDECTOMY AND ANTERIOR FIXATION.

Mrs. —, aged 36. No history recorded in notes. Present, Drs. Rodgers, McCombs, Wallace, Baumgarner and Corbus.

OPERATION, OCTOBER 15, 1892. Patient in Trendelenburg's posture. A free central incision. The omentum found adherent to the tubes and uterus separated; some bleeding vessels ligated and torn edges of omentum cut away. The right tube and ovary are bound in a mass of adhesions to the posterior surface of the uterus, the floor of the pelvis and caput coli. The side of the tube and the vermiform appendix are adherent. The head of the colon, including the vermiform appendix, is now separated from the mass below, and the vermiform appendix, with the meso-appendix, are ligated close to the caput coli,

and cut away. The mass in the pelvis was now separated by the finger following in the planes of cleavage. The mass, consisting of the right ovary and tube, was tied off near the horn of the uterus and removed. The left ovary and tube were bound down in the pelvis and to the corresponding side of the uterus in a mass of exudate, and were with difficulty separated and removed. There was quite free bleeding. The pelvic cavity was raw, as was also the posterior wall of the uterus. The end of the table was lowered and the cavity was flushed out with hot water, which was dried out, and packed with hot sponges. Fixation at, and below the lower angle of the wound was made of the fundus uteri. After removal of the sponges the abdominal wound was closed with interrupted silk worm gut sutures, a glass drain tube remaining near the lower angle of the wound.

Result. Recovered.

Note. December 14, 1900. If the case was before me for operation to-day, something over eight years having elapsed, I would make a supra-vaginal amputation instead of a ventral fixation of the uterus. In other respects the technique of the operation will stand.

REMOVAL OF THE UTERINE APPENDAGES.

Miss —, aged 30. Excessive dysmenorrhea, confined to bed ten days of each month. Present, Drs. Stone and Rodgers.

OPERATION, OCTOBER 18, 1892. The right ovary found enlarged, cystic and was removed.

Result. Recovered.

ANTERIOR FIXATION.

Mrs. —, aged 40. Multipara. Uncomplicated retroversion of the uterus. Present, Drs. Stone and Rodgers.

Result. Recovered, and confined within a year without dystocia.

OVARIOTOMY.

Mrs. —, aged 28. Patient is greatly emaciated and very feeble. Pulse running at 140. Abdomen very large. Diagnosis, multilocular ovarian cyst. She was married seven years ago; a year later her first child was born. Prior to the birth of this child Dr. McCarter discovered an ovarian tumor in her abdomen, more than six and one-half years ago. A very unfavorable prognosis was given to the husband. This he submitted to his wife, who insisted upon having her only chance for life. Present, Drs. Stone, Rodgers, Murdoch and McCarter.

OPERATION, OCTOBER 20, 1892. Her bowels having been cleared out thoroughly, the patient, with a pulse running anywhere from 140 to 160, was etherized. An hypodermic injection of strychnia was administered. An unusually long central incision was made between the umbilicus and pubis. After separating the adherent omentum and some parietal adhesions, the tumor, springing from the right ovary, was broken down with the trocar. When the tumor thus reduced was drawn through the incision, the pedicle was exposed. It was ligated with a strong silk ligature and amputated with the Pacquelin cautery. The ligature lay close to the right horn of the uterus. The tumor and its contents were estimated at twenty-five pounds. The tumor springing from the left ovary still remained to be dealt with. It was multilocular; all of its large compartments were filled with colloid. It was broken down and delivered and its pedicle ligated with strong silk ligature. The Pacquelin cautery would not work now and I divided the pedicle with the scissors. The patient was elevated into the Trendelenburg posture and the cavity was sponged dry. The wound was long, the abdominal wall very thin, and the pelvic contents were fully exposed to view.

The uterus was somewhat larger than normal, the pedicle stumps were short, and the ligatures securing them both lay

close to the uterine cornua. The uterus, unsupported, fell back into the pelvis, the fundus was brought forward to the lower angle of the wound and there fixed with two buried silk worm gut sutures. I never saw an apparently cleaner sweep of the ovaries and tubes from the pelvis of a patient than was revealed in this case. The cavity having been carefully cleaned up and the wound closed with interrupted silk worm gut sutures (the operation lasted twenty-five minutes), the patient was put to bed still alive. Stimulants were administered with the hypodermic syringe, and by the rectum, and later by the mouth, while the foot of the bed was kept elevated, the patient on a mattress without pillows and surrounded by bags of hot water. After a few days' suspense as to the result she began to come around and finally made a good recovery.

Future History. The operation was done on October 20, 1892. On June 10, 1894, she gave birth to a male child weighing ten and one-half pounds. Again, on February 25, 1896, she gave birth to a second male child weighing eight pounds. Her children are healthy, and she is still living at the present writing.

Note. Sufficient ovarian tissue must have been left in this woman to generate healthy ova, but where that speck of ovarian tissue remained will always be a mystery. Following double ovariectomy, other cases of subsequent pregnancy have been reported since this case occurred, one or two in the United States and one or two in Europe.

SALPINGO-OÖPHORECTOMY WITH VENTRO-FIXATION.

Mrs. —, aged 28. Pelvic inflammation following confinement three years ago. Present, Drs. Stone and Rodgers.

OPERATION, OCTOBER 28, 1892. Appendages removed through a short central incision. Pathology, chronic salpingitis and ovaritis, fimbriae of the tubes adherent. Fundus of

the uterus fixed above the pubic symphysis at the lower angle of the wound with buried silk worm gut sutures.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATION.

Mrs. —, aged 40. Endometritis, bi-lateral laceration of the cervix, retroversion of the uterus, anal fissure. Present, Drs. Stone, Rodgers and Kerr.

OPERATION, OCTOBER 31, 1892. Abdominal and vaginal technique, followed by curretteage, trachelorrhaphy, ventral fixation of the fundus uteri, with two buried silk worm gut sutures, and closure of the wound, divulsion of the sphincter ani muscle. The ventral fixation of the fundus uteri was accomplished through a very short wound, which exposed but did not divide the peritoneum. Time occupied in the four procedures, twenty-five minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 30. Pelvic inflammation. Present, Drs. Rodgers, Stone and Corbus.

OPERATION, NOVEMBER 2, 1892. Central incision. Enucleation of pus tubes and adherent ovaries from both sides. Ligation of pedicles and division with the Pacquelin cautery.

Result. Recovered.

SALPINGO-OÖPHORECTOMY AND VENTRAL FIXATION.

Mrs. —, aged 30. Melancholia. At times insane, has been a patient in an asylum. Diagnosis: Uterus retroverted, ovaries and tubes diseased. Present, Drs. Stone, Rodgers and O'Brien.

OPERATION, NOVEMBER 3, 1892. Appendages on both sides found adherent, separated by the finger tips, and re-

moved through a very short central incision, through which also, the fundus of the uterus was fixed to the ventral wall, at and below the lower angle of the wound.

Result. Recovery.

Future History. Between three and four months after the operation, her husband reported her to be mentally "as well as she ever was," and also that she experienced no pelvic disturbance whatever. I have heard of her occasionally during the last eight years, during which time she has remained perfectly well.

. OVARIOTOMY.

Mrs. —, aged 70. Tumor was detected four years ago by Dr. Ackerman of Wheeling, Va. Six months ago considerable quantity of ascitic fluid, in addition to the tumor, was diagnosed. Present, Drs. Stone, Rodgers, Kerr and McCance.

OPERATION, NOVEMBER 5, 1892. Fearing that the tumor might be malignant, and having a fairly good idea of its size, I hoped to deliver it unbroken. The abdomen was large. An incision extending from an inch above the umbilicus to the reflection of the vesico-peritoneum, above the pubis, was made. Several gallons of ascitic fluid escaped from the wound, and was sponged out. There were no adhesions. The tumor was brought through the wound, its pedicle ligated and divided, the cavity was flushed out with hot water, and the wound closed by interrupted silk worm gut sutures. Time consumed, fifteen minutes.

The tumor sprang from the right ovary, was multilocular, and contained a half gallon of fluid.

Result. Recovered.

VENTRO-FIXATION.

Mrs. —, aged 24. Uncomplicated retroversion of the uterus. Present, Drs. Rodgers, Corbus and Stone.

OPERATION, NOVEMBER 16, 1892. Very short incision, uterus fixed to ventral wall, at and below lower angle of the wound, with two buried silk worm gut sutures. Wound closed.

Result. Recovered.

OVARIOTOMY.

Miss —, aged 52. Twenty seven years ago she was examined by a physician who told her that she had a tumor. Fifteen years ago she felt it herself in her lower abdomen. Six weeks ago she observed edema of the lower extremities, and her abdomen has filled up with ascitic fluid. Present, Drs. Stone and Rodgers.

OPERATION, NOVEMBER 19, 1892. A four inch central incision exposed the abdominal cavity, and released about three gallons of ascitic fluid, the residuum being sponged out. The true pelvis was filled with a papillomatous mass involving both ovaries and tubes. The entire mass including the ovaries and tubes, was enucleated with the hand, the pedicles secured by ligation, and divided with the Pacquelin cautery. The pelvis was flushed out, and sponge packed, the sponges removed and the wound closed with a glass drain tube in its lower angle. The tube was removed at the end of twenty-four hours. Diagnosis-malignant disease of the uterine appendages.

Result. Recovered.

Future History. The patient died during the following year from cancer of the peritoneum.

SALPINGO OÖPHORECTOMY WITH ANTERIOR FIXATION.

Mrs. —, aged 35. Chronic ovaritis and salpingitis, with retroversion of the uterus. Dysmenorrhea. Very nervous. Present, Drs. Rodgers and Corbus.

OPERATION, NOVEMBER 21, 1892. Short central incision, adhesions broken up with the fingers, ovaries and tubes drawn

up, pedicles ligated, and divided, pelvis flushed out, wound closed with interrupted silk worm gut sutures, after ventro-fixation of the fundus uteri.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 24. Dysmenorrhea, scanty flow. Diagnosis, chronic salpingitis and ovaritis.

OPERATION, DECEMBER 8, 1892. Ovaries cirrhotic, with chronic interstitial salpingitis, adherent on both sides. Technique of operation as usual.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 27. History wanting in the notes. Present, Drs. Stone, Rodgers, Corbus and Jones.

OPERATION, DECEMBER 2, 1892. First—Repair of extensive bi-lateral laceration of the cervix, preceded by curetteage.

SECOND OPERATION. Laparotomy—Removal of vermiform appendix. Removal of adherent pus tubes and ovaries. Pelvis flushed out and wound closed. Time occupied, forty-five minutes.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Miss —, aged 45. Diagnosis, multiple fibroids. Mass large, and has been growing for several years. Present, Drs. Rodgers and Stone.

OPERATION, DECEMBER 11, 1892. A central incision made of sufficient length to admit of the withdrawal of the tumor, flat sponges were pushed into the pelvis, and abdominal cavity, about the wound. A strong silk ligature was applied to the

upper third of the broad ligament, and firmly tied outside of the ovarian attachment, securing the ovarian artery. On the uterine side of the ligatures, lock handled compression forceps controlled any hemorrhage from the uterine side. The ligaments thus ligated on each side, were now severed with the scissors, and an elastic ligature was thrown around the pedicle, consisting of the supra-vaginal cervix, cellular tissues, and uterine arteries, and peritoneum. Two hysterectomy pins were passed across the pedicle immediately above the elastic ligature, and the mass was cut away above the pins. The pedicle was secured in the lower angle of the wound, the peritoneum on the margins of which, was brought into close apposition with the peritoneum of the pedicle. The sponges were removed and the wound closed with interrupted silk worm gut sutures. The stump was seared over with the Pacquelin cautery, and packed around carefully with small bits of iodoform gauze, and covered with a powder consisting of iodoform and sub-sulphate of iron. The balance of the wound being covered with iodoform and boracic acid.

Result. Recovered. Remains in good health eight years later.

OVARIOTOMY.

Mrs. —, aged 65. Has been married forty-four years, and given birth to twelve children. Ceased to menstruate at fifty, and has developed a large multilocular cyst, ovarian. Present, Drs. Stone, Rodgers and Ross of Clarion, Pa.

OPERATION, DECEMBER 18, 1892. Long central incision, separation of very extensive adhesions, omental, parietal and intestinal, ligation of numerous vessels with silk, removal of a small portion of omentum, reduction of larger cysts, pelvis and lower abdominal cavity filled with flat sponges, ligation of the pedicle, and division of the same with the Pacquelin

cautery. Removal of sponges from the cavity, which was now flushed out with hot water and sponged dry. Introduction of flat sponges beneath the wound, passing of interrupted silk worm gut sutures, free ends secured by hemostatic forceps. Removal of sponges, tying of sutures, closing the wound.

Result. Recovery.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 25. Multipara. Diagnosis, pyo-salpinx. Present, Drs, Rodgers, Baumgarner and Corbus.

OPERATION, DECEMBER 31, 1892. Central incision, removal of appendages on both sides. Right tube filled with pus. Left tube and ovary adherent. Wound closed after flushing out the pelvis.

Result. Recovery.

NEPHRECTOMY

Mrs. —, aged 32. Some time previous to this, the patient had been subjected to a nephrotomy, and drainage, on account of an abscess, having its origin in the kidney. At the time the nephrotomy was made, a quart of pus was evacuated. The discharge continuing, with evidence of tubercular disease of the kidney, a nephrectomy was decided upon. Present, Drs. Rodgers, Baumgarner and T. L. Van Kirk.

OPERATION, JANUARY 7, 1893. The suppuration and drainage connected with the usual inflammatory phenomena of such cases, obscured the anatomical landmarks. A lumbar incision, passing through the line of the original incision, exposed the capsule surrounding the kidney, it constituted the abscess sac; this was found to be three-eighths of an inch in thickness. and adherent to everything. The opened sac was washed out with 1-4000 bichloride solution. It contained the kidney which was suppurating and adherent. To remove the

sac was found impossible. The kidney adherent to the wall of the sac, was detached. and a strong ligature was placed firmly upon the vessels and ureter, en masse. The kidney was now cut away above the ligature, and removed. The wound was narrowed by interrupted silk worm gut sutures, including the cut edges of the sac, and through the opening remaining in the wound, the cavity of the sac was packed with iodoform gauze. This was removed at intervals of several days, the sac irrigated, and a smaller quantity of gauze was pushed into the sac. After a protracted period, characterized by high temperatures, chills and sweats, during the first three weeks after operation, she finally recovered. She was still living several years after the operation.

LAPAROTOMY FOR LARGE FIBRO-CYST OF THE UTERUS.

Mrs. —, aged 61. Nullipara. A fibro-myoma existing prior to the menopause, and giving no especial trouble, after the menopause, underwent cystic degeneration and has now developed into an enormous abdominal tumor. Present Drs. Rodgers, Baumgarner, Corbus and Duff.

OPERATION, JANUARY 20, 1893. A free central incision exposed the abdominal cavity and the tumor, which was found to be free from adhesions, and to be connected with the uterus by a slender pedicle. A trocar was driven into the tumor and something more than a gallon of chocolate colored fluid was drawn off. The fluid had a disagreeable odor. The tumor was delivered and the pedicle was secured as in ovariectomy, with a silk ligature, and divided with the Pacquelin cautery. The pelvic cavity was flushed out with hot water, dried out, and the wound was closed with interrupted silk worm gut sutures.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. — aged, 44. Multipara. Is suffering with metrorrhagia and menorrhagia of three years duration. Tumor distinctly felt in the pelvis and lower abdomen. Present, Drs. Rodgers, Corbus, and Eastman of Uniontown.

OPERATION, JANUARY 25, 1893. Trendelenburg posture. Central incision. Uterus with multiple fibroids found filling the pelvis and extending upwards about one-third of the distance between the pubis and umbilicus. A strong silk ligature was passed at about the junction of the middle and upper third of the broad ligament and tied firmly, securing the ovarian artery outside of the ovary. A pair of lock-handled forceps was applied across the Fallopian tube and adjacent section of broad ligament at the horn of the uterus. The broad ligament was now severed by the scissors. The same procedure was repeated upon the opposite side. The mass, including the ovaries and tubes, was now dragged into the wound, a rubber ligature was applied around the mass at its base, two hysterectomy pins were passed at right angles above the elastic ligature, and the mass was cut away. The pelvis was flushed out with hot water, after removing the sponges and lowering the patient. Flat sponges were placed beneath the wound. The stump was secured in the lower angle of the wound as usual. Interrupted silk worm gut sutures were passed, their free ends secured by hemostatic forceps, the sponges removed and the wound closed. The stump was seared with the Pacquelin cautery, dressed with a powder composed of iodoform and sub-sulphate of iron.

Result. Patient recovered.

Future History. December 15, 1900, patient still living.

OVARIOTOMY.

Mrs. —, aged 39. Multipara. Diagnosis of multilocular ovarian cyst made three years ago. Present, Drs. Rodgers, Baumgarner, Corbus, Duff and Dodson.

OPERATION, JANUARY 28, 1893. A free central incision exposed the cavity and tumor, which did not exactly present the ordinary appearance of an ovarian cyst, and which lay in a gallon of ascitic fluid, now pouring out of the wound. After separation of some slight adhesions in different directions, the tumor was found to spring from the left ovary, and to be anomalous in character, so far as its origin was concerned, as it was a true fibro-cyst. The tumor was reduced with the trocar and delivered. The pedicle was short, broad and thick; it was ligated with silk and cut off with the thermo-cautery. The original incision had been extended to a point midway between the umbilicus and ensiform cartilage. The pelvic and lower abdominal cavities was already filled with flat sponges. Interrupted silk worm gut sutures were passed transversely the entire length of the wound, their free ends secured by hemostatic forceps. The sutures crossing the wound were separated and the sponges were withdrawn. A pitcher of hot water was poured into the pelvis and sponged out. The wound was closed down to a glass drain tube resting in its lower angle. The tube was removed twenty-four hours later. The tumor and its contents weighed twenty pounds.

Result. Patient recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 30. Thrown from a sleigh two years ago, badly injured. Has not menstruated for eighteen months with the exception of a slight "show" for a few hours fifteen months ago. Suffers from excessive dyspareunia. A mass is felt to the right of the uterus. Present, Drs. Stone and Rodgers.

OPERATION, FEBRUARY 1, 1893. Central incision. The appendages are found abnormal and adherent, and are detached with the fingers, following the planes of cleavage. They were

drawn out, their pedicles ligated and divided. Chronic salpingitis, ovaritis and chronic pelvic peritonitis present. Pelvis was washed out with a pitcher of hot water, wound closed. Time occupied, twenty minutes.

Result. Recovered.

Note by Dr. Rodgers. Microscopical examination of the ovaries, which were cystic, shows many ova in very large Graafian follicles, surrounded by unusually large proligerous disks, formed of hyperplastic cellular elements, which were large and multi-nucleated. The infection probably specific.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 29. Has been an invalid for five years, her invalidism increasing during the last eighteen months. Her menstruation is very scanty and irregular, and very painful. Examination per vaginam reveals adherent ovaries and tubes. Present, Drs. Stone, Rodgers and Taylor.

OPERATION, FEBRUARY 2, 1893. Short incision and removal of the appendages on both sides.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 29. Has developed an unusually large fibromyoma. Has had menorrhagia and metrorrhagia for more than three years. Present, Drs. Stone, Baumgarner, Corbus, Mathiott and others.

OPERATION, FEBRUARY 5, 1893. Long, central incision. Ligation and division of upper two-thirds of the broad ligament, tumor turned out, the neck of the uterus surrounded by an elastic ligature, hysterectomy pins passed above the ligature, and the mass cut away above the pins. Removal of a large number of flat sponges which had been introduced into the

pelvis and abdominal incision about the base of the mass. Stump was secured in the lower angle of the wound, which was then closed. Tumor weighed sixteen and one-half pounds. Time consumed, forty minutes.

Result. Recovered.

OVARIOTOMY.

Miss —, aged 24. Patient very anaemic. Has been suffering from uterine hemorrhages and much pain. Says that she has a dangerous hemorrhagic "disposition," she means diathesis. Says that after the pulling of a tooth, she almost bled to death some time ago. The bleeding was so persistent that she required both the services of a dentist and a surgeon. A tumor is made out occupying the left half of the true pelvis, its dome reaches above Poupart's ligament. Another not so large occupies the right side of the pelvis. Present, Drs. Stone, Corbus and Baumgarner.

OPERATION, FEBRUARY 6, 1893. A free central incision, which continued to ooze blood from start to finish. Rapid enucleation of both adhering masses in the pelvis, accompanied and followed by free bleeding. Each mass with its corresponding tube was drawn out, its pedicle ligated and divided. By this time the pelvis had been packed full of sponges, they were quickly removed, and pitcher after pitcher of water so hot that I could scarcely bear my hand in it, was poured into the pelvis, which was then quickly sponged dry. She continued to bleed, I took a piece of iodoform gauze about thirty inches square, unfolded it, and seizing it in the center with sponge forceps, thrust it down behind the uterus to the bottom of Douglas' pouch, where it was held by the Assistant, supporting the forceps. Into the bag thus formed, I pushed mass after mass of iodoform gauze, until I had literally stuffed the

pelvis. The edges of the gauze bag were gathered together in the lower angle of the wound, which was then closed with closely set interrupted silk worm gut sutures, the sutures extending downwards into the gauze at the lower angle of the wound. A large mass of compresses and absorbent cotton were placed over the wound and abdomen, and secured by a many-tailed abdominal binder, which was applied with sufficient force to make firm pressure on the packing of the pelvis and abdominal wound. The patient was put to bed with her head low, and pelvis elevated. The mattress formed an incline plane. The foot of the bed being highly elevated. Stimulants were administered by the rectum and with the hypodermic syringe. On the afternoon of the following day, she was anaesthetized by the administration of A. C. E. mixture by Dr. Corbus, the stitches were removed and the wound re-opened, the mouth of the iodoform bag was opened up, and all the gauze contained within it was removed, and the gauze forming the bag was carefully and slowly drawn out, and the wound re-sutured, dressed with iodoform and boracic acid, gauze, cotton and a binder.

Result. Patient recovered.

Note. The cysts were ovarian, adherent and filled with blood. One cyst contained a little over a pint, and the other less than three-quarters of a pint. I heard of this patient a year or two later, when she was reported in fair condition. The entire time occupied with the first operation was thirty minutes. During my studies in Vienna, I enjoyed the friendship of Dr. Mikulicz, first assistant to Prof. Von Bilioth, whose name is associated with the introduction of iodoform gauze into the pelvis for the purpose of drainage. It was only a step to use it for packing the pelvis for the arrest of hemorrhage.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 29. Received infection during a miscarriage

soon after marriage. Diagnosis, chronic salpingitis and ovaritis. Present, Drs. Stone and Jones.

OPERATION, FEBRUARY 9, 1893. Short central incision and removal of the appendages in the usual way. One ovary as large as a lemon and cystic, the other smaller and cystic.

Result. Recovery.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 38. Chronic salpingitis and ovaritis. Present, Dr. Stone.

OPERATION, FEBRUARY 14, 1893. Anaesthetic by a nurse. Short central incision, removal of adherent appendages in the usual manner, and wound closed as usual. Time eighteen minutes.

Result. Recovered.

Mrs. —, aged 34. Widow, during last ten years. Thirteen years ago had one child by deceased husband. Has been having cataleptic convulsions preceded by attacks of great pain referred to the pelvic region, and sent to the gynecological department by Dr. Beatty. The patient states that she menstruated two weeks ago. An examination was attempted per vaginam. A linear, circular contraction or stricture of the vagina was present at about the juncture of its middle and upper third. The tip of the finger was barely admitted within the lumen, or circular opening. Instead of dilating the lumen under an anaesthetic as should have been done, the finger was withdrawn and introduced into the rectum, and bi-manual examination was effected in this way. A bi-lateral laceration of the cervix was made out and as the uterus was larger than normal, the cause was erroneously assigned to be sub-involution. There was another fault in the examination,

namely: the introitus of the vagina was not inspected, and still another, namely: absolute reliance upon the patient's statement, that her menstrual period had not been interrupted, and that she was unwell two weeks previous to this time. As all treatment had failed to relieve her, it was decided under the circumstances, to remove her uterine appendages.

OPERATION, FEBRUARY 18, 1893. A short central incision was made and through it her ovaries and tubes were removed, and the wound closed. The uterus was felt but not seen in the operation, and I remarked that it was larger than normal.

Result. Recovered.

Note. Gynecological science had gained a point through a mistake in diagnosis. It was now proven that the uterine appendages on both sides of the pregnant uterus could be removed without disturbing a pregnancy.

In nine months less forty-one days after the operation, she was delivered of twins and by her own subsequent admission, she was exposed but once, and that forty days prior to the operation.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 30. Nullipara. Menorrhagia and metrorrhagia. Multiple fibroid tumor in the pelvis. Present, Drs. Baumgarner, Stybr and Davidson.

OPERATION, FEBRUARY 27, 1893. Supra-vaginal hysterectomy, with elastic ligature, technique as in former cases.

Result. Died in the third day of shock and peritonitis.

Note. Had uncontrollable vomiting from the start, even prior to operation was vomiting some. Source of infection could not be located.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 56. Multipara. Menorrhagia and metrorrhagia.

Diagnosis, cancer of the cervix. Present, Drs. Stone, Baumgarner and Stybr.

OPERATION, MARCH 1, 1893. Cancerous tissue in the cervix was scooped out with a Simon's spoon, the vagina thoroughly cleansed with antiseptic solution. A circular incision at the vaginal junction, opening of the cul-de-sac, separation of the uterus from the bladder and opening of the utero-vesical space, uterus and appendages cut out between clamp forceps. Insertion of gauze strips between the forceps, reaching as high as their points and filling the vagina.

Result. Recovered.

Note. The fundus of the uterus contained two fibroid tumors, one the size of a walnut, the other the size of a hickory nut.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 39. Multipara. Long continued pelvic distress, with constitutional disturbance. A mass felt filling the pelvis. Present, Drs. Baumgarner, Corbus, Hoffman and Huselton.

OPERATION, MARCH 3, 1893. A free central incision, the patient in Trendelenburg's posture, exposed the contents of the pelvis. Two cystic ovarian tumors, one on each side of the uterus, both universally adherent, were carefully separated with the fingers. On each side the cystic ovary, with the corresponding tube, was drawn into the incision, the pedicle ligated and divided with the thermo-cautery. The pelvis was packed with hot sponges, and when all oozing had ceased and all sponges had been removed, the abdominal wound was closed with interrupted silk worm gut sutures. Time consumed, forty minutes.

Result. Patient recovered. Pathology: Each ovary was a little larger than a goose egg, and the fimbriated end of the

tube was in each case firmly glued to the ovary. When the ovaries were split open they were both found to contain several ounces of pus. There was no pus in either tube. This case I believe to be one of so-called ovarian hydrocele, which had undergone suppuration. The cyst was not tubo-ovarian, because the tubes were not enlarged, nor did they contain any fluid. It was the first case of the kind with which I had ever met, nor have I seen another since.

Further along in these notes will be found a case of true tubo-ovarian abscess, the result of gonorrheal infection.

INTESTINAL ANASTOMOSIS.

Mrs. —, aged 46. Has suffered from femoral hernia for fifteen years. In January, 1892, or fifteen months ago, it became strangulated, efforts at reduction proved futile, and an operation for her relief by Dr. R. S. Wallace, of East Brady, Pa., saved her life, but left an artificial anus at the site of the hernia. Patient is feeble, and has been partially sustained for a long time by nutritive enemata. At the site of the hernia two openings exist, neither of them large, but both discharging fecal matter. With the hope of avoiding a much more dangerous procedure, I decided to try lateral anastomosis by means of a Murphy button. Present, Drs. Bell, Thomas, Beatty and DeWolf.

OPERATION, MARCH 25, 1893. Central incision. One loop of the ileum was found attached to the abdominal wall at the internal margin of the artificial anus. The upper or afferent half of the loop was abnormally large and its walls were abnormally thick. The lower or efferent half of the loop was much smaller than normal, and its walls were atrophied. It was evident that little or nothing had been passing through the intestine below the hernial opening. About two and one-half inches

from the attachment of the intestine to the artificial anus, I selected a point on the upper half of the loop and a point directly opposite on the lower half of the loop, and cutting a button hole in each fastened them together with a Murphy button. Between the button and the attachment of the loop to the artificial anus there was a space or opening between the afferent and efferent sections of the loop. Fearing that this opening might admit a loop of intestine, I closed it with a running suture extending from the attachment to the artificial anus to the Murphy button. A protecting sponge was now removed and the abdominal wound closed. Time occupied, twenty-seven minutes. I did nothing with the external opening of the artificial anus, deciding in my own mind that if, after the button would come away, the artificial anus persisted, I would make an application to it of the actual cautery and close it by forced inflammation.

Result. Recovered.

Note. Within a period of three weeks after the operation the patient was up and taking a liberal diet, and having frequent evacuations by the rectum. Week after week passed and the button did not appear in the stool. About the first of August I suggested to Dr. Thomas, in charge of the case, that the patient should be fed large quantities of mashed potatoes every day. On the fifteenth of August, within a few days of five months after the operation, I received the following letter from Dr. Thomas: "The concern about the button in Mrs. ——'s case was relieved yesterday morning by its passage via naturalis. On Friday evening she had an attack of "cramps," similar to intestinal colic, followed by diarrhoea on Saturday and Sunday. Monday morning she used the commode before dressing and made a slight effort of stool, and the hardware took a tumble. The purse strings around the button were in situ, with some intestinal tissue adhering. She has been quite robust all summer, lacking only in locomotion, a stiffness remaining

which is gradually loosening up. The button is smooth and enameled in black. The outcome all through is very gratifying. Again congratulating you, I remain, yours truly, G. D. Thomas." This patient, after seven and one-half years, remains well.

OVARIOTOMY.

Mrs. —, aged 39. Multipara. Four years ago a large multilocular ovarian cyst was diagnosed. She has never been tapped, and has long been bed-ridden, and is wasted to a skeleton. When occupying a three-quarter bed in the hospital, and lying upon her side, close to the edge of the bed, there was barely room enough left in the bed for the accommodation of her immense abdomen. She had the most enormous tumor I have ever seen, and her condition was so wretched that I turned away from the case without any hope. Her friends were assured that if operated upon, she would die. This information was conveyed to the patient by her friends. She would not be deterred, and she was now as determined to have an operation, as she had been determined not to have one years before, when it certainly would have been safe.

OPERATION, MARCH 25, 1893. A very long central incision, probably twelve inches, opened the cavity and exposed the growth. Extensive anterior parietal adhesions were first broken up. A Spencer Wells trocar was driven into two enormous cysts, which were evacuated. The adherent omentum was now detached and part of it cut away, and its vessels ligated. Extensive and numerous intestinal adhesions were now separated, and a large number of silk ligatures were applied to bleeding points. Further reduction of other cysts with the trocar continued, more and more adhesions were encountered, some of which were divided by the scissors, and finally, after strenuous effort, extending over thirty minutes, the tumor was delivered

and the pedicle exposed. It was ligated with silk ligature, above which Baker-Brown's clamp was applied, and the pedicle burnt off close to the clamp. The abdomen and pelvis were already full of flat sponges, probably a dozen, these were all removed. Several pitchers of hot water were poured into the pelvis and sponged out. Over a protecting sponge, interrupted silk worm gut sutures were passed through the wound. The sponge was removed and the sutures tied, closing the wound. The patient was put to bed alive.

Result. Died in the thirty-sixth hour after operation from exhaustion.

Note. The contents of the tumor, which had been carefully preserved, and the solid parts and empty cysts, were handed over to a committee, consisting of Drs. Stybr, McGrew and Foster, who had it all transferred immediately to the scales, and superintended its weighing. They furnished me with a written certificate setting forth that the tumor and its contents weighed one hundred and twenty-seven pounds.

It is questionable whether a woman, permitting herself or being permitted to reach such an extremely hopeless condition, with an ovarian tumor, is entitled to anything at the hands of a surgeon. He is almost sure to fail, and the death of the patient is liable to deter other women from operations within safe periods. However, I have never had the courage to refuse a woman a chance for her life under any conditions.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 32. Multipara. Subject of chronic disease of the uterine appendages. General health broken. Marked neurasthenia. Present, Drs. Stone, Rodgers and Van Dyke.

OPERATION, APRIL 7, 1893. Short central incision, separation with the fingers of adherent appendages on both sides.

Removal of appendages on both sides. Some hot water poured into the pelvis and sponged out.

Result. Recovered.

CHOLECYSTOTOMY.

Mrs. —, aged 41. Repeated attacks of biliary colic. Present, Drs. Stone, Huselton, Holman, Baumgarner, Corbus, Dunlevy, McGraw and others.

OPERATION, APRIL 7, 1893. An oblique incision parallel to the right costal margin, exposed the gall bladder. Separation with the finger of slight adhesions, introduction of sterilized gauze to protect the cavity, dome of the gall bladder incised. With the scoop and forceps, removal of seventy two stones from the gall bladder and cystic duct. Stitching the opening in the top of the gall bladder, to the peritoneum and aponeurosis in the upper angle of the wound. Interrupted silk worm gut sutures passed through the wound, the free ends caught in hemostatic forceps. Separation of the sutures crossing the wound with the fingers, drawal of all sterilized gauze. Introduction of rubber drain tube into gall bladder, tying the sutures, closing the wound, below the tube.

Result. Patient Recovered.

Note. After the expiration of forty-eight hours, the gall bladder was irrigated daily, with a solution of boracic acid, for a week, after which the tube was removed and the fistula allowed to close.

COMBINED ABDOMINAL AND VAGINAL HYSTERECTOMY.

Mrs. —, aged 37. Has been married seven years, is sterile. Suffers constantly from a pelvic tumor, reaching about half way to the umbilicus. Present, Drs. Stone, Corbus and Baumgarner.

OPERATION, APRIL 13, 1893. Free central incision, exposing the tumor. Ligation and division of upper two-thirds

of the broad ligaments, including the ovarian arteries. Clamp forceps across the tubes at the uterine cornua. A number of flat sponges are placed under the abdominal wound; elevation of the patient's extremities, securing the lithotomy position. Perinæum depressed with a short Simon retractor, circular incision around the cervix; short lateral incision on each side of the cervix, toward the base of the broad ligaments, with the scissors. Blunt dissection with the finger and closed blunt scissors, opening Douglas' cul-de-sac and the utero-vesical space. Application of lock handled forceps to the lower third of each broad ligament; separation of the uterus with the scissors. Limbs lowered, patient in the dorsal decubitis. Sponges removed through the abdominal wound, uterus, appendages and tumors lifted out en masse. The uterus contained two tumors, one sub-peritoneal, just above the reflection of the bladder, the other interstitial. Some hot water was poured into the pelvis and sponged out, and some ran out through the vagina. The abdominal wound was closed, the limbs again elevated, the perinæum drawn down, and strips of iodoform gauze were passed per vaginam, as high as the points of the forceps, and the vagina itself, loosely filled with iodoform gauze.

Result. Patient recovered.

Note. Forceps were removed in the forty-second hour, also the gauze, which was replaced with fresh gauze, which was removed at the end of the fourth day, after which the vagina was irrigated daily with fifty per cent. Thiersch's solution. The question of accurate intra-abdominal diagnosis prior to operation is always difficult, and always subject to error, and for many years was to me a source of anxiety and worry. But, in November, 1882, in a conversation with the late Prof. Theodore Von Bilroth, in Vienna, I asked him this question- "In what proportion of abdominal cases do you find it possible to make an accurate diagnosis, prior to opening the abdominal cavity?" He replied, "When I was young I bothered myself

much about diagnosis. Now when I know that I must open the abdominal cavity I do it." From that day to this when I have decided that I must open the abdominal cavity I leave the finesse of diagnosis until after I have opened the cavity.

OVARIOTOMY.

Mrs. —, aged 47. Rapidly-growing multilocular cyst. Present, Drs. Stone, Langfitt and others.

OPERATION, APRIL 16, 1893. Free central incision. Introduction of the hand, no adhesions, presenting cyst very large. Giving the assistant a pair of forceps with which to seize the edge of the incision, I laid the cyst open with a knife, seizing the lip of the incision on my side with a pair of forceps; as the fluid poured out we delivered the cyst. The pedicle was tied and burnt off with the thermo-cautery. Pelvis flushed out with hot water, sponged out and the wound closed.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 27. One child at term, three miscarriages, cervix lacerated, ovaries prolapsed, a nervous wreck, weighing sixty-six pounds. Present, Drs. Stone and McCready.

OPERATION, APRIL 24, 1893. Removal of the uterine appendages. Time, fourteen minutes. Patient developed a pelvic hematocele which suppurated and was opened and drained per vaginam, after which she made a complete recovery.

Note. I have thus far neglected to say that a large proportion of the cases done during 1892, and up to this time in 1893, were done with the hands encased in boiled rubber gloves. About this date, however, April, 1893, I almost ceased to use them, and later abandoned them entirely until the present year,

1900, when I returned to their use. While they have very decided advantages, they have objections. The sense of touch is by no means as good with as without them. If this sense is not required in the operation the gloves are safer than the naked hand.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 28. Has had four children at term. Bad health for two years, during which time she has not been pregnant. A semi-elastic mass is felt in the pelvis, behind the uterus. Present, Drs. Stone, McNaugher and Wallace.

OPERATION, APRIL 27, 1893. Central incision, removal of appendages on both sides after freeing them from adhesions. The right ovary is multi-cystic, as large as a large orange. The left ovary was also cystic, and some small cysts were developed about the mouth of the tube.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 37. An ovarian cyst which has been frequently tapped during the last seven years. Present, Drs. Stone, Welsh, Patton, Higby, Wallace and Neely.

OPERATION, MAY 4, 1893. Central incision, cyst tapped of fifteen pints of clear fluid, unilocular cyst delivered, pedicle ligated and severed with the thermo-cautery. Opposite ovary found micro-cystic and removed. Pelvis sponged out, wound closed by interrupted silk worm gut sutures.

Result. Recovered.

Note. December 17, 1900. Patient still living and in good health.

LAPAROTOMY FOR HYDRO-NEPHROSIS.

Mrs. —, aged 42. A large cyst has gradually developed in the abdominal cavity. It occupies the right hypochondriac, right lumbar, the right half of the epigastric and

umbilical regions, and upper and inner portion of the hypogastric region. The patient is a multipara, has had attacks of inflammation in the pelvic organs. There has been little or no pain associated with the development of this cyst. The case is supposed to be one of hydro-nephosis. Present, Drs. Baumgarner, Wallace, Billick, Joel Van Kirk and Theodore Van Kirk.

OPERATION, MAY 10, 1893. Free median incision, evacuation of the cyst with trocar, division of the meso-colon, exposing the kidney. The vessels entering the kidney were ligated with silk worm gut ligature and the kidney was taken out. The opening in the meso-colon was stitched up with silk ligature, the flat sponges were removed from the abdominal cavity, and the wound was closed with interrupted silk worm gut sutures. No drainage.

Result. Patient recovered.

Note. The hospital notes make no mention of the condition in which the kidney was found, and it is so long ago that I do not recall the condition, but at this date, December 18, 1900, the patient is still living and in good health.

COMBINED ABDOMINAL AND VAGINAL HYSTERECTOMY.

Mrs. —, aged 37. Pelvis full of tumors. Present, Drs. Baumgarner, Dunlevy and Wallace.

OPERATION, MAY 12, 1893. Free median incision, exposing the cavity. Trendelenburg posture. Ligation of ovarian arteries with the infundibulo-pelvic ligaments. Clamp forceps applied at the junctions of the tubes with the uterus, compressing the tubes, and a portion of the broad ligaments. The left ovary is cystic, large as an orange. The right is cystic and as large as a lemon, and the uterus containing multiple fibroids, is projecting upwards, between them. With the scissors to the outer side of each ovary, and to the inner side of the ligatures controlling the ovarian

arteries, the broad ligaments are divided downward and inward, to a point short of the lateral wall of the uterus, on both sides. The lower abdomen is now filled with flat sponges up to and into the wound. The table is lowered and the patient brought into the lithotomy position. The vagina and cervix uteri are separated, by circular and lateral incisions, blunt dissection with the finger and closed blunt scissors, is carried upwards until Douglas' cul-de-sac and the utero-vesical space are open. A pair of lock handled clamp forceps are applied to the broad ligaments on either side of the uterus, and with the scissors the ligaments are divided between the forceps and the uterus, to a point as high as the forceps reach on each side. Patient is now returned to the Trendelenburg posture. The sponges are removed, the mass is drawn upwards and forwards, and with a few snips with the scissors, near the points of the forceps in the vagina, the mass is lifted out entire. It consists of the uterus, subsequently found to contain twelve fibroid tumors, two ovarian tumors, the Fallopian tubes and the major portion of both broad ligaments, and weighed entire, six pounds. After withdrawal of the mass, the end of the table was lowered, the pelvis flushed out with hot water, much of which escaped by the vagina. Protecting flat sponges were laid under the wound, interrupted silk worm gut sutures were passed, the free ends caught by hemostatic forceps, the sutures were separated by the fingers in the wound, the protecting sponges with drawn, and the sutures tied, closing the wound. Patient's limbs were again elevated, and strips of iodoform gauze were passed, reaching above the tips of the forceps, the vagina loosely packed with iodoform gauze, and the patient put to bed. *Result.* Patient recovered.

OVARIOTOMY.

Mrs. —, aged 60. Multipara. For years past has been developing an intra-abdominal cyst. At the present time it is

very large. Diagnosis by Dr. R. S. Wallace, ovarian cyst. Present, Drs. Stone, R. S. Wallace, Jones and Dunn.

OPERATION, MAY 13, 1893. Four inch median incision, introduction of the hand, no adhesions adjacent to the wound. Cyst penetrated with SpencerWells trocar, completely collapsed and drawn through the wound, pedicle ligated and divided by thermo-cautery. Wound closed. The tumor was a simple mono-cyst, but unusually large. The original notes state that fifty pints of fluid were drawn off.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 27. Three successive pregnancies have been followed by abortions, and pelvic peritonitis. Present, Drs. Stone, Wallace and Hunter.

OPERATION, MAY 24, 1893. Adherent appendages on both sides removed through a two and one-half inch median incision. Wound closed. Time occupied, nine minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 38. Multipara. Diagnosis of multilocular ovarian cyst made by Dr. Purington. Present, Drs. Stone, Wallace, Hunter, Purington and Hockenberry.

OPERATION, MAY 26, 1893. Four inch median incision, separation of omental and parietal adhesions with the hand, cysts tapped and delivered, sponges introduced into the pelvis, ligation of pedicle, and division with the thermo-cautery, sponges drawn out, opposite ovary and tube removed, sponges re-introduced, interrupted sutures passed through the wound, free ends caught by hemostatic forceps, sutures crossing the wound separated by the fingers, sponges withdrawn, sutures tied, closing the wound. Entire time consumed, twenty minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 29. Slowly growing abdominal cyst, with but little disturbance of general health. Cyst reaching to the umbilicus. Present, Drs. Stone, Wallace, Hunter and Hockenberry.

OPERATION, MAY 25, 1893. Short central incision, rapid evacuation of par-ovarian cyst, with Wells trocar, ligation and division of the pedicle, closure of the wound. Finished operation in nine minutes.

Result. Recovered.

NEPHRECTOMY.

Mrs. —, aged 35. Multipara. Has a large solid tumor in the abdomen, occupying the right hypochondriac, right lumbar, adjacent half of the epigastric and umbilical, and upper and outer portion of hypogastric regions. No fluctuation can be detected, patient's general health suffering seriously. Tumor supposed to be malignant. Present, Drs. Hunter, Ohail and McNish.

OPERATION, MAY 27, 1893. Patient placed upon her right side across a pillow rolled firmly in a gum sheet. A long incision extending from the edge of the erector-spinae muscle at a point an inch below the twelfth rib, was carried obliquely downward to a point near the anterior spine of the ileum. The skin, fat and superficial fascia, the external and internal oblique muscles, the lower portion of the latissimus-dorsi muscle, the lumbar aponeurosis, were divided. In the course of the incision a number of vessels were caught up in hemostatic forceps. The sub-renal fat was now exposed, torn open, a part of it removed, and the kidney, enormously enlarged, was exposed. The abdominal cavity was also found to be open at the lower end of the wound, exposing the meso-colon stretched over the kidney. The meso-colon was now slit up with the scissors and the mass was well exposed. It was carefully separated with

the hand from some adhesions to the peritoneum and drawn forward. The pedicle was reached, the artery, vein and ureter were ligated with silk ligature, and the pedicle divided, releasing the kidney. The cavity was carefully sponged out, and some protecting sponges previously introduced into the cavity were removed. The peritoneum of the meso-colon was stitched to the peritoneum of the incision. The wound was partially closed by interrupted silk worm gut sutures from above downwards and from below upwards. A liberal amount of iodoform gauze was inserted into the cavity, the ends left protruding, at the unclosed portion of the wound. The operation was finished in thirty-five minutes.

Result. Patient recovered.

Note. The tumor was solid and one section presented a mottled or tessellated appearance. The specimen was sent to the Army Medical Museum, Washington, D. C. No report of its character has been received. I am sure that it was malignant, and probably a sarcoma. I have never heard of the patient since she left the hospital.

OVARIOTOMY.

Mrs. —, aged 36. Multipara. Has a very large abdominal tumor. Fluctuation cannot be detected. For some time the tumor grew slowly, later with great rapidity, and there is a history of repeated attacks of peritonitis, none of which have probably been general, or more properly speaking, widely diffused.

OPERATION, JUNE 1, 1893. A free central incision exposed the abdominal cavity, containing more than a gallon of free colloid. The presenting cyst wall is open, exceedingly thin, seems to have undergone absorption from internal pressure. It still contains an enormous quantity of colloid, and consists of but a single cavity. This jelly substance was removed from

the cyst cavity, and the latter almost devoid of adhesions, was drawn out, its pedicle ligated and divided. The jelly substance was patiently removed from the cavity of the abdomen and pelvis, which was thoroughly flushed out with hot water. the cavity having been dried out with sponges. The wound was closed.

Result. Recovered.

Note. December 26, 1900. Patient living and in good health.

OVARIOTOMY.

Mrs. —, aged 29. Supposed until recently, to be pregnant, Large abdominal cyst, ovarian in character, has developed in nine or ten months. Present Drs. Hunter, Ohail and Martin.

OPERATION, JUNE 2, 1893. Cavity opened by a four inch median incision. Extensive omental and parietal adhesions separated with the hand. Ligation of omental vessels, and cutting away a small portion of the omentum. Reduction with the trocar of a large presenting cyst. Breaking down with the hand, having first freed it from extensive adhesions, of a large adenomatous mass, followed by delivery of the entire growth. The pedicle was found twisted, accounting for the previous peritonitis and extensive adhesions. Pedicle ligated with silk and divided with the Pacquelin cautery. Abdominal and pelvic cavities flushed out, sponged dry, and the wound closed.

Result. Recovered.

Note. I met with my first case of twisted pedicle in 1878, and diagnosed the case as such. The patient had been confined two weeks previously. A large ovarian cyst occupied the abdominal cavity, there was considerable abdominal tenderness, and the temperature was running from 100 to 100½. She was in the hands of two of the oldest practitioners of medicine in

the City, who were not willing to be associated with a young man with whose diagnosis they would not agree, and they left the case in my hands. On the following day, with the assistance of the late Dr. James McCann, and Dr. F. Le Moynes both a few years my senior, and both of whom have left enviable reputations as surgeons, I opened the patient's abdomen and removed a very large multilocular ovarian cyst, the pedicle of which was twisted two and one-half times. Extensive recent adhesions were broken up with the hand.

The gentlemen who had left the case, in after years, were numbered among my best friends, and when they died, left behind them most enviable reputations. They were the late Drs. George D. Bruce and A. M. Pollock.

I did not see another case of twisted pedicle until February 21, 1881. At that date, being in Berlin, and attending the operations of Prof. Schröder and Langenbeck, and Dr. Martin, I was present at an operation by Prof. Schröder, when he removed a multilocular ovarian tumor, the pedicle of which was twisted. Soon afterward I saw him remove an ovarian cyst about as large as an orange, and black, its circulation being cut off by a twisted pedicle.

In my own work during the last twenty-five years, I have encountered a great many cases of twisted pedicle. There is no particular stage of development in an ovarian cyst at which time torsion of the pedicle occurs, and our best explanations of the phenomenon are probably incomplete. However, we may safely reckon among the causes, unequal distribution of gas in the intestinal tract, the filling and emptying of the bladder, and rectum, unequal development of different sections of the tumor itself, the co-existence of a second tumor, or pregnant uterus, and the application of external force at either equatorial pole of the growing cyst.

When the pedicle has become twisted, the return venous circulation is promptly cut off, but the arterial circulation con-

tinues to supply the cyst with blood, through an indefinite period. The cyst becomes enormously congested; extravasation of blood occurs into its various compartments, and becomes mixed with the ovarian fluid. In the meantime an adhesive inflammation is set up between the cyst wall and the abdominal peritoneum. According to the time which elapses before operation, the adhesions are limited or universal. Thus Nature makes an effort to preserve the life of the cyst, and to prevent the dissolution of the patient. Meanwhile the pedicle of the tumor may disappear through "fatty degeneration" and absorption. Finally the cyst wall undergoes "fatty degeneration" and when opened and cleared of all fluids, portions of the colon are visible in the cyst wall, the margins so adherent that there is no communication between the adherent cyst and the abdominal cavity. I have encountered such a case which will be recorded in these notes, the subject of which was cured by long continued drainage, after opening and washing out, the degenerating cyst.

Let any operator make the following experiment, and he will be surprised at the ease with which an ovarian tumor may be rotated on its pedicle. Given a non-adherent globular cyst, reaching well up into the abdominal cavity. Through a four inch incision, let him place his fingers upon one of its equatorial poles, and elevate or depress that portion of the tumor. Any pressure applied unequally from without, to a non-adherent ovarian cyst is liable to rotate it sufficiently for the displaced intestines, with an unequal distribution of gas, to complete the process.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 36. Multipara. Pelvic infection. Left ovary prolapsed, right ovary enlarged and adherent. Present, Drs. Stone and Hunter.

OPERATION, JUNE 8, 1893. Short incision, removal of appendages on both sides. Finished in fifteen minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 26. Sterile. Recurrent pelvic peritonitis. Diseased appendages. Chronic salpingitis and ovaritis. Present, Drs. Stone and Wallace.

OPERATION, JUNE 15, 1893. Short incision, separation of adherent appendages with the finger, ligation and division of the pedicles and closure of the wound. Time, twenty minutes.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 43. Multipara. Has developed a very large myoma. Present, Drs. Cunningham and Beck.

OPERATION, AUGUST 1, 1893. Long median incision, ligation of the ovarian arteries, and application of clamp forceps across the uterine end of the tubes; division of the upper two-thirds of the broad ligaments with the scissors; elastic ligature firmly applied around the base of the mass; passing of two hysterectomy pins through and at right angles to the pedicle above the elastic ligature. Mass cut away above the pins; removal of protecting flat sponges from the pelvic and abdominal cavities. protecting flat sponges placed under the wound, interrupted silk worm gut sutures passed, caught by hemostatic forceps: sutures crossing the wound separated by the fingers, withdrawal of sponges, sutures tied, closing the wound down to the pedicle, the peritoneum of which had been united by suture to the peritoneum of the incision. The tumor weighed sixteen pounds. Time occupied in its removal, thirty-five minutes.

Result. Patient recovered with a small supra-pubic vesical fistula. The bladder had been nipped by the elastic ligature.

LAPAROTOMY FOR UMBILICAL HERNIA AND DISEASED
APPENDAGES.

Mrs. —, aged 35. Multipara. With an old umbilical hernia, irreducible. Chronic ovaritis and salpingitis, ovaries enlarged and prolapsed. Present, Drs. Hunter, Ohail, Murdoch and Huselton.

OPERATION, AUGUST 14, 1893. Median incision, extended elliptically over the hernial protrusion. Opening hernial sac and removal of a portion of adherent omentum. Dissection of the sac from about the hernial opening, cutting it away at its juncture with the peritoneum at the inner edge of the hernial opening. Removal of the uterine appendages on both sides. Sponges introduced into the pelvic cavity, under the abdominal wound, replacing those soiled. The exposed edge of the hernial opening was split all the way round to increase width of surfaces when in apposition. The abdominal wound was now closed, as the sponges were removed, by buried step sutures.

Result. Recovered.

Note. What the subsequent history of this case has been I do not know, as I have never heard of her since she left the hospital.

CESAREAN SECTION.

Mrs. —, aged 38. Is a very short, broad-chested, squat woman, with spondylolisthesis. In April, 1892, the Drs. Van Kirk delivered her by craniotomy. She is now finishing the thirty-seventh week of her second pregnancy. Present, Drs. Stone, Williamson, Hunter, Thomas M. Shaw, Jones, Joel Van Kirk and Theo. Van Kirk. Drs. W. L. Stone and J. H. Williamson assisting.

OPERATION, AUGUST 26, 1898. A five-inch median incision exposed the pregnant uterus. A number of flat warm sponges

were introduced into the abdominal cavity and pushed down on the sides of the uterus. An incision about four and three-quarter inches long was made in the anterior uterine wall, revealing the placenta. The hand was inserted under the edge of this and pushed through the membrane, the child was seized by the feet and delivered, the placenta coming away with it. The uterine tissue contracted promptly. A uterine dilator previously boiled was passed into the cervical canal, which was then thoroughly dilated. The cavity of the uterus was sponged out with very hot water and the wound in the uterus was closed with a double row of silk sutures; the first row were buried and the second row were Lembert sutures inserted three to the inch. The abdominal cavity was flushed out with hot water and the wound closed with interrupted silk worm gut sutures. The child was delivered in four minutes from the beginning of the operation, which was only completed at the end of forty-five minutes. The child was resuscitated and cried lustily.

Result. The patient did not manifest a single bad symptom during the first nine days and was nursing her babe. On the tenth day she had a slight elevation of temperature, which was more marked on the eleventh day. I ascertained from the nurse that there had been no lochial discharge since the end of the ninth day. Suspecting that there was retained secretion in the uterus, I opened up the cervix with a dilator, and was rewarded by a flow of probably half an ounce of fetid secretion from the interior of the uterus. On the thirteenth day she died of septic endometritis and peritonitis.

Note. December 18, 1900. The child is now a fine healthy girl in her eighth year. If I had done a Porro-operation, with the elastic ligature or Kœberle's serre-neud, with both of which I had been so successful in the removal of the uterus with large fibroids, I have no doubt that I would have saved this woman. But the temptation to do the Cesarean section, and save the uterus and its appendages, was for some reason uppermost in

my mind. Arrested drainage was the primary cause of her death.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 29. One child at term followed by three miscarriages. Since the last miscarriage, two years ago, has suffered from chronic salpingitis and ovaritis. Marked melancholia. Present, Drs. Stone, Hunter, Holman and O'Brien.

OPERATION, SEPTEMBER 4, 1893. Adherent appendages removed from both sides, through a two and one-half inch median incision. Wound closed by interrupted silk worm gut sutures. Time, fifteen minutes.

Result. Recovered.

Note. Patient's mental condition improved rapidly, and a year later Dr. Holman divulsed the sphincter ani muscle on account of an anal fissure. He discovered a small ulcer on the rectal mucosa and applied to it some treatment. It refused to heal and later he excised it. It proved to be an epithelioma, and returned, destroying the patient a year or two later.

SALPINGO-OÖPHORECTOMY FOR FIBROID TUMOR.

Miss —, aged 43. Slowly growing fibroid, with hemorrhages and pain. Present, Drs. Stone, Hunter, Busch and Van Kirk.

OPERATION, SEPTEMBER 11, 1893. Removal of the ovaries and tubes through a short median incision.

Result. Recovered.

Note. "West Newton, Pa., December 27, 1900. Dr. R. S. Sutton, Dear Doctor: Your letter of inquiry of the 22nd, inst. at hand. The fibroid in Miss — case was not only arrested, but entirely disappeared. Merry Christmas and Happy New Year. Respectfully yours, B. H. Van Kirk."

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 26. Multipara. Last child born more than a year ago. Confinement followed by pelvic inflammation. An examination per vaginam, conducted bi-manually, reveals a uterus smaller than normal, super-involuted, left ovary not felt, right ovary large and adherent. Under the circumstances, namely: labor followed by infection and pelvic inflammation, and pathological changes in the pelvic viscera, it is thought that the mental symptoms can be accounted for as reflex, and it is decided to remove the appendages. Present, Drs. Hunter, Ohail, Miller and Kirkpatrick.

OPERATION, SEPTEMBER 12, 1893. Through a short median incision, the left atrophied and cirrhotic ovary, and the right enlarged and cystic ovary, with their tubes, were removed, and the wound closed by three interrupted silk worm gut sutures, in twelve minutes.

Result. She made a prompt recovery from the operative procedure, the wound healing by first intention, but the mental symptoms were not relieved. But on the contrary, the symptoms became more violent, resulting finally in acute mania. She died finally at the hospital of what was supposed to be acute meningitis. An autopsy of the brain was not permitted, but an examination of the region of the operation resulted in the unanimous opinion that the latter had probably had no effect one way or another on her cerebral disease, and that the operation was misplaced was my own deduction.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 35. Multipara. Interstitial fibro-myoma, growing rapidly. Severe hemorrhages. General health failing. Present, Drs. Stone, Hunter and Miller.

OPERATION, SEPTEMBER 14, 1893. Free central incision, ligation and division of upper two thirds of the broad ligaments

application of elastic ligature to the base of the mass, introduction of hysterectomy pins above the ligature, and amputation of the mass above the pins. Removal of sponges from the pelvic and abdominal cavity, the stump fixed in the lower angle of the wound, which was closed as in other cases. The stump was trimmed off somewhat, and covered with a thick layer of equal parts of iodoform and tannin.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 23. Severe dysmenorrhea, with attacks of recurrent pelvic peritonitis. Sterile. Present, Drs. Stone and Hunter.

OPERATION, SEPTEMBER 15, 1893. Short median incision, removal of appendages on both sides. Closure of the wound. Time, fifteen minutes.

Result. Recovered.

Mrs. —, aged 38. Multipara. Has been an invalid for seven years. Chronic salpingitis and ovaritis on the right side, uterus inclined toward the left side. Present, Drs. Stone, Wallace and Van Kirk.

OPERATION, SEPTEMBER 18, 1893. Short median incision, introduction of two fingers, carried down to the left side of the uterus. Careful search fails to discover either an ovary or a tube on that side. The broad ligament is rudimentary, coming off the uterus at a point much lower than normal. Right ovary and tube found diseased by reason of chronic inflammation, and removed, after separation of some adhesions. Time, twenty minutes.

Result. Recovered.

Mrs. —, aged 23. Was a healthy girl when married five years ago. After marriage she developed dysmenorrhea,

leucorrhea, sub-acute urethritis. Later, salpingitis and ovaritis. The old story of specific diseases in the husband. Present, Drs. Stone and Wallace.

OPERATION, SEPTEMBER —, 1893. Short median incision, ovaries and tubes separated from dense adhesions, and removed, pedicles ligated and divided by the thermo-cautery. It was necessary to increase the incision to three inches in length during the operation. The left ovary and tube were thoroughly adherent to the fimbriated end of the tube. The right ovary was as large as a turkey egg, the fimbriated end of the tube was spread over and adherent to it, and the tube itself was enlarged. Later, when the ovary was laid open it was found to be full of pus of a greenish hue, which also extended into the tube. The pelvis was irrigated with hot water, and the wound closed.

Result. Recovered.

Note. Stitch hole abscess in the process of recovery, which was excellent. The picture of a fine young girl in the bloom of maidenhood, full of love and purity, being sacrificed in marriage to a man who has been the subject of a gonorrhea, is pitiable beyond expression. Within a year, or a few years, she often becomes a wreck, her life is blighted, and only made physically tolerable by the surgeon's knife.

OVARIOTOMY.

Mrs. —, aged 36. Multipara. A very rapidly growing multilocular cyst. Abdomen about as large as is usual with a full term pregnancy. Has been suffering pain for two or three days. Present, Drs. Stone and Wallace.

OPERATION, OCTOBER 9, 1893. Three-inch median incision, ovarian fluid appears in the incision. Introduced hand encounters no adhesions. Superior large cyst entered with the trocar, reduced mass drawn through the wound. A deeper cyst found empty, having ruptured some days ago. The pedi-

cle was ligated with silk, divided with the thermo-cautery, peritoneal cavity thoroughly washed out by irrigation, dried with sponges on a sponge holder. Wound closed. Time, thirty minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY WITH ANTERIOR FIXATION.

Mrs. —, aged 33. Multipara. Chronic salpingitis and ovaritis, with retroversion of the uterus. Present, Drs. Stone and Wallace.

OPERATION, OCTOBER 10, 1893. Short median incision, removal of the ovaries and tubes on both sides. Fixation of the fundus uteri at and below the lower angle of the wound with buried silk worm gut sutures. Time, twenty minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 36. Repeated miscarriages. Diagnosis, pyosalpinx. Present, Drs. Stone and Ohail.

OPERATION, OCTOBER 13, 1893. Three-inch median incision, removal of adherent appendages on both sides, both tubes containing pus. Specific. Pelvis irrigated with hot water. Wound closed. Time, thirty minutes.

Result. Recovered.

CHOLECYSTOTOMY.

Mrs. —, aged 58. Frequent attacks of biliary colic, attack in progress at this time. Great tenderness about the region of the gall bladder. Present, Drs. Stone and Hunter.

OPERATION, OCTOBER 23, 1893. Oblique incision, parallel with the right costal border, exposed the gall bladder. The in-

testines adjacent to it are stained with bile, and a localized peritonitis is in progress. As the gall bladder is drawn into the wound bile spurts from a small opening in its wall. With moist gauze exuded bile is wiped up and moist gauze is pushed in around the gall bladder. The dome of the gall bladder is laid open with the scissors, and with the scoop and forceps, and spontaneous expulsions from contraction of the gall bladder itself, two hundred and twenty-five gall stones are removed from the gall bladder and cystic duct.

The incision in the gall bladder was stitched in the lower plane of the abdominal wound at its upper angle. A rubber tube was introduced into the gall bladder. Silk worm gut sutures were passed through the margin of the wound below the tube, their ends caught up in hemostatic forceps, the sutures between the margins of the wound were separated with the fingers, and the gauze was withdrawn from the abdominal cavity. The sutures were now tied, closing the wound. The gall bladder was irrigated after the expiration of the second day, daily, with a solution of boracic acid.

Before the removal of the tube the patient was permitted to eat some Malaga grapes, the seeds from some of which were washed from the gall bladder on the following day. The opening into the duodenum was probably still relaxed from the recent passage of a gall stone through it. It is the only instance I ever met with where anything from the intestine entered the gall bladder.

Result. The patient recovered.

Note. Within a month after being discharged from the hospital, an attack of biliary colic of moderate severity was experienced. More than seven years have elapsed since that attack, which was the last. It is not probable that the attack was occasioned by a stone, but may have been from abnormally thick mucous discharging from the previously-inflamed mucosa of the gall bladder.

OVARIOTOMY.

Mrs. —, aged 58. Patient has a cystic tumor springing from the left side of the pelvis. Has recently had an attack of peritonitis, accompanied by high temperature. Present, Drs. Ansley, Busch and Hunter.

OPERATION, OCTOBER 31, 1893. Free central incision, opening the cavity and exposing the cyst. The hand was passed down between the abdominal wall and the cyst, and around the latter, in search of adhesions. Under the weight of the hand the cyst ruptured and expelled its contents into the abdominal cavity. In the bottom of the cyst was a mass of papillomatous growths. The pedicle was reached and a ligature was located on it low down. With the hand and the scissors, the cyst, and papillomatous growth from above the pedicle, were cleared out. The abdominal and pelvic cavities were thoroughly washed out with hot water and a glass drain tube was inserted into the pelvis, its proximal end resting in the lower angle of the wound, which was closed with interrupted silk worm gut sutures. The patient was left in a country house many miles away, with Miss Woodside, an accomplished nurse, who had long been in my employ, and Dr. Bush, who was the attending physician.

Result. Recovered.

Note. A portion of the papillomatous mass was placed in the hands of Dr. Matson, the accomplished Bacteriologist of the city of Pittsburg, for microscopical examination. Later he reported the disease to be malignant. The patient lived seven years, had no return of her abdominal disease, and died of pneumonia.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 33. Has been married six years, sterile, has dysmenorrhea, dyspareunia, prolapsed ovaries, and a retroverted uterus. Present, Drs. Hunter and Ohail.

OPERATION, NOVEMBER 4, 1893. Short central incision, adhesions broken up with the fingers, appendages removed on both sides and wound closed. Time, twenty minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 27. Multipara. Had puerperal peritonitis at the birth of last child, two years ago. Has chronic salpingitis. Present, Drs. Stone and Ansley.

OPERATION, NOVEMBER 11, 1893. Short median incision, removal of appendages on both sides, wound closed. Time, twelve minutes. Pathology, interstitial salpingitis, both ovaries atrophic and cirrhotic.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 42. Has been married twenty-four years, has borne seven children at term, and had three abortions. She is now a chronic invalid confined to bed, and is brought to the hospital on a stretcher. Present, Drs. Stone, Hunter and Ohail.

OPERATIONS, NOVEMBER 20, 1893. First: Sub-involuted uterus curetted, Second: Bi-lateral laceration of the cervix repaired, by trachelorrhaphy. Third: Repair of a laceration of the perinæum, perineorrhaphy. Fourth: Divulsion of sphincter ani muscle, for anal fissure, and rigidity of the muscle. Fifth: Short median incision in the abdominal wall, and removal of the ovaries and tubes from both sides. Wound closed with interrupted silk worm gut sutures. Time consumed in the five procedures, thirty-six minutes.

Result. Recovered, with complete restoration to health a few months later.

Note. In following the example of Edebohl in doing a series of gynecological operations, in immediate succession, I

wanted to know what time was actually required to complete such a series as this case presented, and had the time accurately kept by Dr. Hunter.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 30. Has had six children at term, two miscarriages, last followed by infection, resulting in chronic salpingitis and ovaritis. Suffers from neuralgia, and is an invalid. Present, Drs. Hunter, Murdoch, Miller and Kirkpatrick.

OPERATION, NOVEMBER 22, 1893. Short median incision, removal of adherent appendages on both sides. Wound closed, finished in seven and one-half minutes.

OVARIOTOMY.

Mrs. —, aged 47. Has been married many years, borne no children. Has an immense multilocular ovarian tumor, and is suffering from considerable pain. Present, Drs. Rowan Clark, W. H. Morrow.

OPERATION, NOVEMBER 24, 1893. Dr. Rowan Clark assisting. A free median incision exposed the cavity of the abdomen. A momentary examination revealed the fact that we had to deal with very extensive adhesions. The end of the omentum was separated from the cyst, some of its vessels ligated and a part of it cut away. Extensive parietal adhesions were broken up with the hand. Two very large cysts were emptied with the trocar, numerous intestinal adhesions were separated, and a dozen ligatures applied to bleeding points. The base of the tumor consisting of a large adenomatous mass, by tedious dissection with the fingers, it was peeled out of the broad ligament and the pelvis. There was no pedicle. The pelvis was packed with hot sponges for a few minutes. They were

withdrawn and the peritoneal cavity was washed out with hot water, at least two gallons having been poured into the cavity from a pitcher. The pelvis was sponged out, as were also the lateral depressions below the kidneys, and the utero-vesical fossa. The pelvis was again packed with hot sponges, interrupted silk worm gut sutures passed through the wound, their ends caught up by hemostatic forceps, sutures crossing the wound were separated by the fingers, and the sponges were removed. Sutures tied, closing the wound. The fluids removed by the trocar weighed forty pounds, and the cysts five pounds. Time occupied in the operation, one hour. The patient was left under the care of Dr. Rowan Clark.

Result. Recovered.

EXPLORATORY INCISION.

Mrs. —, aged 70. Has had symptoms of obstruction, more or less complete, of the intestine, for a fortnight. Dr. Murray has exhausted all medical effort to relieve her. Present, Drs. Murray and Stone.

OPERATION Our joint diagnosis was malignant disease at some point, and very low down in the tract. It remained to be proven that the diagnosis was correct. She was chloroformed, and an incision one inch long was made in the median line, terminating at the reflection of the vesical peritoneum. Through this I passed my finger and explored the cavity. In the pelvis an extensive development of cancer, involving the sigmoid flexure of the colon, was recognized. The wound was closed with two or three interrupted silk worm gut sutures. Time, ten minutes.

There is no result to record, that the patient died later of cancer, goes without saying. This case is recorded to show how easy it is sometimes to perfect a diagnosis.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 20. Married at nineteen, soon developed dysmenorrhea, leucorrhœa and backache. Became pregnant and aborted, developed a double suppurating salpingitis. The old story of the pure girl and the impure man. Present, Drs. Hunter, Murdoch and Miller.

OPERATION, DECEMBER —, 1893. Free median incision, separation of the end of the omentum from the left distended tube. The adherent ovary and tube distended with pus on the left side, were peeled out with the fingers, following the planes of cleavage. The tube was delivered unruptured, the pedicle tied, and divided with the Pacquelin cautery. The adherent ovary and distended tube on the right side were treated in the same manner. The pelvis was irrigated with hot water, dried out, and the wound closed as usual. Time, thirty minutes.

Result. Recovered.

Note. The story told in this case is a familiar one in these notes, and those of all Gynecologists. I sometimes think it would be better for a woman to marry a man who had syphilis, than to marry a man who had gonorrhea. Up to, and even after this date, it was my habit when removing the appendages in these cases, to leave the uterus in situ, and if necessary, to treat it later. But in 1894, when in Brussels, Belgium, attending the operations of my friend Dr. Jacobs, he convinced me that in all such cases, the operation should be done by the vagina, and that the uterus also should be removed.

SALPINGO-OÖPHORECTOMY FOR FIBROID OF THE UTERUS.

Mrs. —, aged 48. Multipara. For some time past has suffered from menorrhagia and metrorrhagia, backache and expulsive pains. The uterus is some what larger than a

goose egg, and contains an interstitial fibroid. Lately in Philadelphia had arranged with Prof. Parvin for an operation, but ran away on the day of appointment. Her sufferings however continuing, and being ashamed to go back to Dr. Parvin, she has come to me. Present, Drs. Hunter, Ohail and others.

OPERATION, DECEMBER 23, 1893. The appendages on both sides were removed through a short median incision. The wound closed as usual. Time, fifteen minutes.

Result. Recovered. Her tumor disappeared within two years with complete restoration to health.

SUPRA-VAGINAL HYSTERECTOMY.

Miss —, aged 35. Has developed multiple fibroids. Menorrhagia and dysmenorrhea. Patient is very fat. Present, Drs. Stone, Hunter, Ogden and others.

OPERATION, DECEMBER 23, 1893. Long median incision, narrowing slightly toward the peritoneum. Ligation and division of upper two-thirds of the broad ligaments, including the ovarian arteries. Clamp forceps thrown across the tubes and ligaments at the uterine cornua. Mass drawn up into the wound. A half or three-quarters of an inch above the reflection of the bladder, an incision was carried across the face of the uterus, and the flap of peritoneum was pushed down. A similar incision was carried across the back of the uterus, and the flap pushed down correspondingly with that in front. Amputation of the cervix was now made with the knife on a level with the depressed flaps, and the uterine arteries were ligated. The presenting end of the cervical canal was touched with the thermo-cautery. The flaps were now united over the stump with interrupted silk sutures. The cavity was cleansed with moist hot sponges through and through, silk worm gut sutures were passed over a protecting sponge, the sponge

withdrawn and the wound closed, after approximating the edges of the aponeurosis by a continuous catgut suture and inserting a drain of six or eight strands of silk worm gut suture along the bottom of the fat layer, and tying the interrupted silk worm gut sutures. Time occupied, one hour.

Result. Uneventful recovery. The uterus, containing six fibroid tumors, weighed five and a half pounds.

SALPINGO-OÖPHORECTOMY FOR FIBROID OF THE UTERUS.

Mrs. —, aged 36. Only child born thirteen years ago. Has suffered long from menorrhagia and metrorrhagia and dysmenorrhea. Is anemic and neurasthenic. Present, Drs. Hunter, Ahlers, Miller, Ogden and Meredith.

OPERATION, DECEMBER 28, 1893. Short median incision, removal of appendages on both sides. Wound closed as usual. The uterus contained an interstitial fibroid about as large as an orange. Time occupied, fifteen minutes.

Result. Recovered.

Note. June 6, 1901. Am informed that her tumor disappeared and that she is in good health.

LAPAROTOMY. (MISTAKEN DIAGNOSIS.)

Mrs. —, aged 36. Multipara. Last labor five years ago, abdomen has been enlarging for one year. A semi-solid mass is felt floating in a large quantity of free fluid in the abdominal cavity. The mass has no uterine attachment. Diagnosis, ruptured ovarian cyst. Present, Drs. Hunter, Murdoch, Ahlers and Voight.

OPERATION, DECEMBER 30, 1893. Median incision, revealing a case of tubercular peritonitis. The small intestines were glued en masse and overlaid with an omentum that looked like a slice of liver. The adhesions uniting the intestines were re-

cent, and the loops of intestine were easily separated. The cavity was flushed out with large quantities of hot water, and the intestines were, as Goodell used to say, "laundried." The cavity was sponged out and the wound closed. Time occupied, forty minutes.

Result. Recovered.

Note. Subsequent history unknown.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 54. Cancer of the "portio-vaginalis." Present, Drs. Hunter, Murdoch and Ahlers.

OPERATION, JANUARY 15, 1894. Separation of the cervix uteri from the vagina with the knife, exposure of the ligaments by blunt dissection with the finger, application of ligatures, including the uterine arteries, and division of the ligaments on the uterine side with the scissors. Opening of the cul-de-sac and utero-vesical space, amputation and removal of the cervix, anteversion and exposure of the fundus uteri with a vulsellum; ligation and division of the exposed appendages, uterus removed. Introduction of iodoform gauze for drainage. Gauze removed forty-eight hours later, some fresh gauze placed in the vagina, removed at the end of the fourth day. Subsequent daily irrigation with fifty per cent. Theirsch's solution.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 22. A subject of hystero-epileptic convulsions. Bi-manual examination reveals an enlarged left ovary, a right normal ovary, both free from adhesions, and also an infantile uterus. Present, Dr. Hunter and others.

OPERATION, JANUARY 17, 1894. Short median incision, appendages removed on both sides. The left ovary contained a

blood cyst. The right ovary was normal. Time consumed in the operation, eight minutes.

Result. Recovered. Lost sight of. Final result unknown.

OVARIOTOMY.

Mrs. —, aged 61. A Hebrew woman, looking much older than her age would indicate, was subjected to amputation of the left breast for cancer two years ago. Within a year it was discovered that she had an abdominal tumor. Her health has failed rapidly, her abdomen enormously distended, and her lower limbs are edematous. Upon any exercise she suffers from embarrassed respiration. The case is already recognized as a very serious one. Present, Drs. Stone, Jones, Ahlers, Clark and others.

OPERATION, JANUARY 20, 1894. A long central incision exposed the abdominal cavity. About three gallons of ascitic fluid escaped and were sponged out. The escape of the ascitic fluid from the wound did not begin until the tumor was separated from the anterior abdominal wall, to which it was adherent. A large superior cyst was emptied with the trocar, after peeling off the omentum and ligating some of its vessels and cutting part of it away. This superior collapsed cyst brought down the transverse colon, which was adherent to it, and which was now separated from the cyst. Some fine silk ligatures were applied to bleeding vessels. Further reduction was accomplished by emptying another cyst with the trocar, and delivery of the mass began. As it came forward a loop of ileum was found almost incorporated with the cyst. Four inches of the ileum were resected and the ends united. Further delivery of the tumor progressed, a hand in behind the cyst breaking up adhesions, which were almost universal throughout the pelvis. Finally the whole mass was enucleated and delivered. No pedicle. Base of the tumor intra-ligamentous.

Sponge packing arrested the free bleeding, after which a search began for bleeding points and other complications. Many ligatures were applied to bleeding vessels, a small rent in the ileum was discovered and sutured, a rent in the sigmoid flexure of the colon was found and also sutured. Gallons of hot water were poured into the pelvic and abdominal cavities, which were sponged dry, the wound was closed in the usual manner, and the patient put to bed. The operation had lasted one hour and twenty-five minutes. The anaesthetic, A. C. E., had been carefully administered by Dr. Ohail, and the patient regained consciousness very quickly after being put to bed. She died later on the same day from sudden collapse of a weak heart.

Note. The tumor was malignant, and probably for the sake of statistics had better been let alone. In a series of sixty cases, done before and after this case, this is the only death. Nevertheless I believe that if this woman's heart had been better she would have survived the operation. An impaired or weakened heart is very common in cases of long standing pelvic and abdominal tumors.

OVARIOTOMY.

Miss —, aged 55. About six years ago I performed a laparotomy for this patient, removing a large multilocular ovarian cyst, springing from the left ovary. The notes of that operation are lost, but it was done upon the lines with which the reader is already familiar. She now returns with her abdomen very much enlarged with ascitic fluid, in which hard masses can be detected by palpation. She also has a ventral hernia, the result of the first operation. Present, Drs. Stone, Ahlers, White, Phillips and others.

OPERATION, JANUARY 25, 1894. Median incision in the line of former wound. Large quantity of ascitic fluid escapes

and is sponged out. The omentum is found to contain isolated masses of cancer, and almost the entire omentum is removed. The right ovary is multi-cystic, and removed after ligation of its pedicle. The abdominal cavity is flushed out with hot water and the wound closed. Time, thirty-five minutes.

Result. Recovered.

Note. The first operation was done when the patient was forty-nine years of age, and the second ovary should have been removed at that time. When the second ovary is under consideration the age of the patient should be taken into account.

ABDOMINAL AND VAGINAL HYSTERECTOMY.

Miss —, aged 32. Multiple fibroids. Dysmenorrhea. Menorrhagia. Failing health. Present, Drs. Stone, Ahlers and others.

OPERATION, FEBRUARY 8, 1894. Free median incision, Trendelenburg posture. A strong silk ligature was passed through the broad ligament of one side, close to the uterus at a point approximately the juncture of the lower with the middle third of the ligament. The ligature, embracing the broad ligament and including the ovarian artery outside of the ovary, was now tied. The broad ligament was divided with the scissors, leaving a secure stump on the side of the pelvis. The same procedure was now practiced upon the opposite side of the uterus. Clamp forceps across the tube at the cornua controlled the bleeding. The mass was now drawn forward into the wound. An incision through the peritoneum and cellular tissue was carried across the front of the uterus above the vesical attachment, and a similar incision across the back of the uterus was also made. With a blunt instrument all the tissues surrounding the neck of the uterus were separated, the mass in the meantime being drawn further up, the vaginal attachment was separated, front and rear, with the scissors, and the mass,

consisting of the uterus, containing multiple fibroids, with the ovaries and tubes attached, was delivered. The opening into the vagina was now closed with catgut, the table was lowered, the pelvis washed out with hot water, and the abdominal wound closed. The limbs of the patient were elevated, the vagina was carefully mopped out and lightly filled with iodoform gauze.

Result. Remarkably smooth and prompt recovery.

OVARIOTOMY.

Mrs. —, aged 27. Ten years married. One child at term. Dystocia. Examination reveals cystic mass in the pelvis. Present, Drs. Stone and Ahlers.

OPERATION, FEBRUARY 13, 1894. Trendelenburg posture. Median incision. Two cystic tumors about as large as lemons, one on each side of the uterus, both closely connected with the uterus, the ovary and tube adherent over the top of each cyst occupied the pelvis. With the fingers the cysts were enucleated, and when they were drawn up, one at a time, the ovary and tube came along, forming the pedicle. Ligatures were applied close to the horns of the uterus, and the pedicles, including the tubes, were divided, and the tumor in each instance, with the ovary and tube, were removed. The pelvis was cleansed with hot sponges and the wound closed.

Result. Recovered. Pathology: The interior of these cysts contained papillomatous growths. If the reader will refer to J. Bland Sutton's volume entitled "Surgical Diseases," he will find on page 93 a chapter on "Par-Oöphoritic Cysts and Warty Ovaries," which will explain the pathology of these rather unusual cases. He will also find in the recent work of E. C. Dudley on "Diseases of Women," page 363, an excellent explanation of this form of cyst.

TOTAL ABDOMINAL AND VAGINAL HYSTERECTOMY FOR LARGE
FIBRO-MYOMA.

Miss —, aged 37. Patient is a very fat woman, who says she is losing flesh. She has a large uterine tumor, with profuse menorrhagia. Recently the tumor has grown rapidly. Present, Drs. Stone, Ahlers, Sproull, Ogden and Kline.

OPERATION, FEBRUARY 24, 1894. A long median incision, exposing the tumor, imbedded in uterine tissue, or interstitial. The mass was dragged into the wound. At about the junction of the middle with the lower third of the broad ligament a long ligature was passed through the ligament close to the uterine tissue, and when tied firmly it embraced the uterine artery, the broad ligament, the infundibulo-pelvic ligament, and ovarian artery. This mass was severed with the scissors in such a way as to leave a good stump outside of the ligature. A pair of lock-handled forceps at the horn of the uterus, across the tube, assisted in the control of leakage. A similar ligature was placed in a similar manner on the corresponding tissues on the opposite side, and division made in the same manner with the scissors. Above the reflection of the bladder an incision was made across the face of the uterus through the peritoneum and cellular tissue. A similar incision was made opposite to this, across the back of the uterus. With the closed short scissors and the fingers the overlying tissues were separated from the supra-vaginal cervix. An assistant supported in the vagina, Dr. Jos. Eastman's instrument having a groove director on its upper surface. As the dissection from above continued, this instrument was felt with the finger pressing against the posterior surface of the vaginal cervix and vault of the vagina. Locating it accurately with the finger, a few snips of the scissors separated the posterior attachment of the vagina to the cervix. Continuing the dissection

around the cervix the vaginal junction was reached and separated all around with the scissors. The tumor and entire uterus were now lifted out and laid aside. The table was now lowered and the abdominal cavity was flushed out with hot water. A few sponges were introduced and the table again elevated, resuming the Trendelenburg position. The sponges were removed and the open top of the vagina was closed by uniting over it the peritoneum with catgut sutures. Two or three sponges were introduced into the pelvis. Interrupted silk worm gut sutures were now passed through the wound, their free ends caught up by hemostatic forceps. That portion of the sutures crossing the open wound were separated by the fingers, the sponges withdrawn, the sutures tied, closing the wound. The table was lowered, the patient's limbs drawn up, the vagina flushed out with a hot solution of boracic acid and loosely filled with iodoform gauze. Time occupied in the operation, one hour and three-quarters.

Result. Patient recovered.

Note. The tumor and uterus weighed seven pounds.

OVARIOTOMY.

Miss —, aged 44. A slow growing painless abdominal tumor, accompanied with cataleptic convulsions. Present, Drs. Stone, Ahlers and Beatty.

OPERATION, MARCH 24, 1894. A multilocular, non-adherent cyst, was removed from the left side. The right ovary being enlarged and cystic, was also removed with the corresponding tube.

Result. Recovered.

Note. Between the date of operation and her discharge from the hospital, twenty-four days later, no convulsions occurred. On December 3, 1898, four and three-quarter years after the operation, her sister called at my office to say that Miss —, was in perfect health.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 31. Was confined with her first child in 1875. The cervix uteri was lacerated, cellulitis and pelvic peritonitis followed. She has dysmenorrhea, accompanied by convulsions. Bi-manual examination reveals a painful mass to the right of the uterus. There is tenderness also to the left of the uterus.

OPERATION, MARCH 26, 1886. Short, median incision. The right ovary is found enlarged and adherent to the tube, and posterior surface of the broad ligament. The adherent ovary and tube were separated from surrounding adhesions, and brought out of the wound, the pedicle was ligatured and divided. The left ovary and tube were now examined and found to be in a state of chronic inflammation, but the husband who was present, *absolutely forbade* their removal. The pelvis was irrigated and the wound closed.

Result. Recovered. The tube removed was impervious.

Note. During the immediate period following the operation, reaching over a number of years, her health was much improved. On April 6, 1894, she returned to the hospital for the removal of the left ovary and tube.

OPERATION, APRIL 10, 1894. Present, Drs. Stone, Ahlers, Small and Pillow. Short median incision in the line of former wound. Introduction of two fingers, the uterus is retroverted and adherent. This being liberated gave access to the adherent left ovary and tube. The adhesions having been broken up with the fingers, the ovary and tube were brought into the wound, the pedicle ligated and divided. The pelvis was irrigated and the wound closed.

Result. Recovered.

Note. I saw her in the following September or October, and she expressed herself as being comfortable, and she certainly looked well. On March 22, 1895, she again returned to the

hospital. She had had a pelvic abscess, which recently discharged through the rectum. Upon examination, bi-manually conducted, I found that the sac had not refilled, and declined to make a vaginal extirpation of the uterus, which was the apparent object of her return.

Two weeks later I advised her to return home, and I repeated this advice both to her and her husband, and through them to her physician. All three of them, husband, wife and physician, persisted in urging the removal of the uterus. I again urged that she go home and wait six months, in order to determine whether the abscess sac would refill or not. They continued to urge the operation.

OPERATION, APRIL 11, 1895. Fifteen days after her admission to the hospital. Present, Drs. Stone, Ohail, Hunter, McCready, Wolf, Emmerling and others. When the anesthetized patient was lying on the operating table, I stated before the doctors present, that I was doing the operation under protest. That I had urged delay.

A circular incision was made around the cervix uteri, and a small lateral incision with the scissors was made on each side of the cervix, beginning at the circular incision, which was made with the curved point of the thermo-cautery. As the cervix was dragged down by the forceps in the left hand, the tissues above the circular incision, were pushed up until the lower planes of the broad ligaments were exposed. A pair of lock handled, clamp forceps were placed on the exposed lower planes of the broad ligaments on each side of the uterus, including the uterine arteries. Between the forceps and the uterus, the ligaments were divided with the scissors, and the lower segment of the uterus freed. The cul-de-sac was now opened and also the vesico-uterine space. The uterus was pulled further down, and a pair of forceps was applied upon either side of the broad ligament, at its middle third, followed by division of the ligaments with the scissors, between the for-

ceps and the uterus. The fundus of the uterus was seized with a pair of strong forceps and pulled into the vagina. The upper segment of the broad ligament on each side of the fundus, was now clamped with lock handled forceps; and by division with the scissors, between the forceps and the uterus, the uterus was freed and laid aside. A blood vessel, probably imperfectly controlled by the last pair of forceps placed to the left of the uterus, was leaking. Another pair of forceps was placed controlling it. The pelvis and vagina were now irrigated. Strips of iodoform gauze were passed to the tips of the forceps. A self-retaining catheter was introduced into the bladder, and the patient was put to bed. No pus had been encountered during the operation, and no adhesions resisting the finger, had made themselves apparent. On the second day after the operation, the patient was wet with a thin, almost colorless fluid. While the amount of urine collected proved that the bladder and ureters had not been injured. The patient was lifted out of bed to a table, placed in the lithotomy position, and the forceps were removed, forty-two hours after operation. The gauze was also removed from the vagina, and fresh gauze was inserted. It was now evident that there was a fistulous opening in the small intestine. Later, fecal matter began to pass through the vagina, and there was evidently a second fistula probably in the sigmoid flexure of the colon. The patient recovered from the operation. Hoping that there might be spontaneous closure of these fistulæ, which marked the points at which the abscess had been discharged into the intestine, a few weeks before operation, the patient remained at the hospital until the eighteenth of June, or a little more than nine weeks. The weather was excessively hot, and she was run down and discouraged, and I desired to send her to her home in the country, that she might remain until Fall, when an effort would be made to close the fistulous openings.

Two circumstances occurred, which determined me not to again receive her into my Institution. On Sunday evening, preceding the eighteenth of June, she sent for me to come to her room. I found her weeping. Upon inquiry as to what the trouble was, she replied, "Every time my husband comes here to see me, you give him liquor." I told her that her statement was untrue, not only as applied to me, but that no person in my employ, had given her husband liquor.

On the eighteenth of June, a few days later, her husband called at the Hospital, and said to the Matron, "That he would go to the Doctor's office, pay his wife's bill, and return with a carriage and take her to the depot." He returned with a carriage and took her away, leaving her bill and expenses unpaid.

A few months later, she applied for re-admission to the Hospital, and I refused to receive her. She then entered the Mercy Hospital, where Dr. X. O. Werder, whom I had made acquainted with the circumstances surrounding the case, successfully resected the small intestine at the site of one of the fistulous openings. The lower fistulous opening closed spontaneously. She recovered.

Note. This was the first case of vaginal extirpation of the uterus, which I had seen followed by intestinal fistula, and I have not had another in my experience.

Dr. X. O. Werder reported this case before the meeting of the State Medical Society of Pennsylvania, held in this city. His report raised the question, "Whether the occurrence of these fistulæ could be attributed to carelessness on the part of the operator or not?" As I was not present, I had no opportunity to discuss the question, and I now express my thanks to Prof. Montgomery of the Jefferson Medical College in Philadelphia, for answering it in the negative in a satisfactory manner.

Byron Robinson cites a case of pelvic abscess discharging from the rectum, in which he made a post-mortem examination. The abscess sac was discharging its contents into the

intestinal tract at four different points. Intestinal fistulæ occur in laparotomy as well as in operations where the peritoneal cavity is exposed per vaginam.

SALPINGO-OÖPHORECTOMY WITH ANTERIOR FIXATION.

Mrs. —, aged 26. Last confinement five years ago. Cervix and introitus vagina lacerated, both slightly. Uterus retroverted. Present, Drs. Stone and Murdoch.

OPERATION, APRIL 26, 1894. Right ovary and tube adherent, separated and removed through a short median incision. Left ovary and tube found in fairly good condition and left. Fundus of the uterus fixed by buried silk worm gut sutures at and below the lower angle of the wound.

Result. Recovered.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 47. Married, but sterile. Abdomen contains considerable ascitic fluid. A solid mass as large as a lemon is felt just below the umbilicus. Two solid masses about the same size occupy the pelvis, one on each side of the uterus. Present, Drs. Stone, McNeal and Wilson.

OPERATION. Diagnosis made in consultation with Dr. McNeal, malignant disease. But we decided to prove or disprove the decision, by an exploratory incision. On April 29, 1894, two days later, a short median incision was made, and a large quantity of ascitic fluid evacuated through it. The diagnosis of cancer of the peritoneum was established, and the wound closed. Time occupied, fifteen minutes.

Result. The woman recovered from the exploration.

SALPINGO-OÖPHORECTOMY WITH ANTERIOR FIXATION.

Mrs. —, aged 29. One child at term four years ago, and several miscarriages since. The uterus is retroverted, both

ovaries prolapsed, right large and tender. Present, Drs. Murdoch and Corbus.

OPERATION, MAY 3, 1894. Appendages on both sides removed through a short median incision. Fundus of the uterus fixed at and below the lower angle of the wound. Wound closed. Time, fourteen minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 26. Married. Sterile. Chronic invalid. Menorrhagia, anæmia, neurasthenia. Present, Drs. Stone and Hunter.

OPERATION, MAY 8, 1894. Short median incision. Adherent ovaries and tubes removed on both sides. Time, sixteen minutes.

Result. Recovery.

Note. Health regained.

OVARIOTOMY.

Mrs. —, aged 23. Married at nineteen, first labor at twenty, after which she developed a tumor in the pelvis, which was diagnosed by Dr. Stybr. Present, Drs. Hunter, Murdoch, Huselton and Stybr.

OPERATION, MAY 9, 1894. Median incision. Separation with the fingers from the posterior surface of the uterus, the posterior surface of the left broad ligament, and floor of the pelvis, an ovarian cyst, about as large as a cocoanut. It was reduced with a small trocar and delivered. The pedicle containing the tube was ligated and divided with the thermocautery. The right ovary and tube were found adherent, the ovary enlarged, and were also removed. A drain tube was inserted into the pelvis, which had been flushed out with hot water. The wound was closed down to the tube.

Result. Recovered.

Note. The drain tube was removed in twenty-four hours. A dissection of the right tube and ovary revealed hair, and fat, proving its dermoid character. The end of the tube adherent to the ovary contained pus.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 27. Last labor three years ago. History of lacerations, cellulitis and pelvic peritonitis. Present, Drs. Stone, Le Moyne and DeWolf.

OPERATION, MAY 10, 1894. Adherent appendages removed through a short median incision, as usual. Time occupied in operation, twenty minutes.

Result. Recovered.

Mrs. —, aged 24. Some time ago contracted gonorrhea, since which date she has had several attacks of peritonitis. Present, Drs. Hunter and Murdoch.

OPERATION, JUNE 2, 1894. Short median incision. Appendages very adherent, with large hydro-salpinx on the right side. The appendages were removed from both sides, and the wound closed by two layers of buried catgut suture, supported by interrupted silk worm gut sutures passed and tied as usual. Time occupied, thirty minutes.

Result. Recovered.

Miss, —, aged 26. Chronic invalid, dysmenorrhea, retroversion, and neurasthenia. Present, Drs. Stone and Ahlers.

OPERATION, JUNE 6, 1894. Two-inch median incision. Appendages removed from both sides. Wound closed. Pathology: Chronic interstitial salpingitis and ovaritis. Time, twenty minutes.

Result. Patient recovered.

ANTERIOR FIXATION OF FUNDUS UTERI.

Mrs. —, aged 34. Retroversion. Present, Drs. Hunter and Ohail.

OPERATION, JUNE 13, 1894. One inch and a quarter median incision, ending at the reflection of the vesical peritoneum, fundus of the uterus brought forward with a sound in the vagina and secured by two buried silk worm gut sutures. Wound closed. Time, fifteen minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 34. Melancholia. Infantile uterus. Dysmenorrhea. Present, Drs. Hunter and Ohail.

OPERATION, June 16, 1894. Removal of normal ovary and tube on the left side and atrophied ovary and congested tube on the right side. Wound closed. Time, twelve minutes.

Result. Recovered.

Note. Mental condition relieved.

Miss —, aged 26. Menorrhagia. Mass felt in the pelvis. Present, Drs. Hunter, Murdoch and Huselton.

OPERATION, JUNE 23, 1894. Median incision. Right ovary as large as a lemon and cystic, left ovary large as a pullet egg and cystic. Chronic salpingitis on both sides, all removed. Wound closed. Time, fifteen minutes.

Result. Recovered.

Note. This patient developed a small fecal fistula in the line of the abdominal wound which closed spontaneously.

LAPAROTOMY FOR SUPPURATING HEMATOCELE.

Mrs. —, aged 26. Ordinary history of hematocele, with severe symptoms, having occurred some weeks ago. Hema-

tocele suppurating. Patient septic. Sac reaches up almost to the umbilicus. Present, Drs. Stone, Hunter and Phillips.

OPERATION, JUNE 23, 1894. A three-inch median incision, with the lower end terminating at the vesical reflection, went directly into the sac. Through this a gallon, probably a gallon and a half, of pus, bloody serum, blood clots and slushy lymph were evacuated, scooped out and washed out. The cavity was packed loosely with iodoform gauze around a glass drain tube, and the entire wound was left open.

Result. Tedious but complete recovery.

Note. Immediately after this operation I went to Europe. The after treatment of the case was conducted by my valuable assistant, Dr. W. L. Stone. From the date of this operation I was absent until the fifteenth of the following September. Upon my return the patient had left the hospital.

OVARIOTOMY.

Mrs. —, aged 60. Multipara. Diagnosis, multilocular ovarian cyst. Present, Drs. Stone, Graver and others.

OPERATION, SEPTEMBER 19, 1894. Median incision. One cyst reduced with the trocar, balance of mass drawn through the wound, pedicle ligated and divided. No adhesions encountered. Wound closed. Time, eighteen minutes.

Result. Recovered.

Mrs. —, aged 55. Multipara. Multilocular ovarian cyst reaching to the umbilicus. Present, Drs. Stone, Hunter and Bell.

OPERATION, SEPTEMBER 22, 1894. Median incision. Upper cyst tapped, withdrawn while being emptied, entire mass following, pedicle ligated and divided, wound closed. Entire time occupied, eleven minutes.

Result. Recovered.

Mrs. —, aged 42. Ovarian cyst reaching almost to the umbilicus. General health unimpaired. Present, Drs. Stone, Hunter and Stranahan.

OPERATION, SEPTEMBER 29, 1894. Short incision, cyst tapped, delivered, pedicle ligated and divided, wound closed. Time, twenty-three minutes.

Result. Recovered.

Mrs. —, aged 65. Widow. Tumor developed within the last two or three years. Diagnosis by Dr. Knox, multilocular ovarian cyst. Present, Drs. Stone and Knox.

OPERATION, OCTOBER 8, 1894. Central incision, separation of slight adhesions with the hand, reduction of large cyst with the trocar, delivery of entire mass, ligation and division of the pedicle. Wound closed. Time, sixteen and one-half minutes.

Result. Recovered.

ONCOTOMY.

Mrs. —, aged 44. During the last four years has had at least four attacks of severe pain in the right inguinal region. None of these attacks were accompanied by nausea and vomiting. At this moment she has a fluctuating mass, measuring three or four inches, and pointing at McBurney's point. Her temperature is running from 100° to 105°, pulse 118. She is anæmic and weak. Diagnosis, uncertain. Exploratory incision decided upon. Present, Drs. Stone, Hunter and Shupe.

OPERATION, OCTOBER 20, 1894. An incision two inches in length, vertical, crossing McBurney's point, and parallel with the edge of the rectus muscle, laid open the abscess sac. Six ounces of pus were evacuated, and with the pus three large gall stones, all fasciculated, were removed. One stone was as large as a hickory nut and the other two were small stones.

They were all true gall stones. The sac was irrigated, a rubber drain tube was placed in each angle of the wound, which was closed between the tubes. On the following day a fourth small stone was discharged during irrigation of the sac. During the anæsthesia it was necessary to administer both brandy and nitro-glycerine to the patient. The peritoneal cavity was not opened.

Result. Recovered and returned home with pus still discharging from the lower angle of the wound.

Remarks. As stated in the history of this patient, notwithstanding the four apparent attacks of appendicitis, she experienced in these attacks neither nausea nor vomiting. This was one reason for doubting the diagnosis of appendicitis. The location of the abscess pointed directly to appendicitis, but when the abscess was opened and it gave up three absolutely typical gall stones, one of them as large as a hickory nut, it seemed incredible that they could have been occupying the cavity of the vermiform appendix. Further, on the following day, a fourth gall stone was discharged, not an infrequent occurrence a day or two after cholecystotomy.

I offer the following report of the analysis of the stones: "Dear Dr. Sutton: The three stones which I saw you remove from Mrs. — a few days ago, and which you gave me for examination, I find to be true gall stones. They consist of biliary pigment and cholesterin. Jacob Wolf, Bacteriologist." Being faithful to convictions, I arrived at the conclusion that we were dealing with a suppurating gall bladder, which was misplaced downwards, and adherent beneath McBurney's point. However, I determined to follow up the case. Now, after six and one-half years, I present the following letter, giving the subsequent history of the case: "Connellsville, Pa., January 2, 1901. Dr. R. S. Sutton, Pittsburg, Pa. Dear Doctor: Yours of recent date at hand, making inquiry concerning the case of Mrs. —. In reply would say that a suppurating sinus in

site of operation remained for about one year, which was terminated by swabbing out this sinus with tincture of iodine. The sinus closed and the lady is perfectly well at present. My diagnosis at the time I attended her, before you operated, was an appendiceal abscess. I myself have operated on a number of cases since then, and they seemed to be parallel cases to Mrs. ——. Concretions were commonly found in my cases, such as to simulate those found in Mrs. ——'s case. However, I found no gall stones, but the literature on the subject says that they are one of the causes of appendicitis. In Mrs. ——'s case I thought at the time, and still think, that the malady was an appendiceal abscess. Very truly yours, M. B. Shupe."

In this case the four stones extracted were typical gall stones, varying in size, and all fasciculated, and were composed of bile, pigments, cholesterin, etc. As stated, one of these stones was as large as a hickory nut, while the others were smaller. The admittance to the cavity of the appendix vermiformis of the smaller stones might be readily conceived, but it is difficult to conceive how the large stone would get into the appendix vermiformis.

Fecal concretions such as Dr. Shupe mentions in his letter as having been found in his cases are not at all uncommon, but they bear no resemblance whatever to gall stones, either in shape or composition, and the surgeon removing both forms of concretion in his surgical work cannot mistake one for the other.

As stated, this lady had four attacks of colic, simulating attacks of appendicitis, but in none of the attacks was there nausea or vomiting. With such a history, and the subsequent finding of gall stones in the abscess sac, it was not possible to determine whether the attacks had been those of appendicitis or biliary colic. Until more definite information is gained in this case, a positive diagnosis as to the viscus which contained the stones should be held sub judice.

OVARIOTOMY.

Miss —, aged 54. Rapid enlargement of the abdomen, which contains a large amount of ascitic fluid and a solid tumor. Present, Drs. Stone, Hunter, Pettit and others.

OPERATION, OCTOBER 23, 1894. Free median incision. Escape of several gallons of ascitic fluid, considerable quantity sponged out. Ligation of the pedicle and removal of a solid tumor of a whitish color, somewhat irregular in shape, although globular, as large as a full-sized cocoanut. It was developed from the right ovary. Wound closed by step and interrupted suture. Time occupied, twenty-five minutes.

Result. Recovered.

Note. Section was subsequently made of the tumor. It was as hard and as white as a turnip, and was what I believe was designated by Thomas Keith as a "weeping fibroid." The patient is still living at this date, December 22, 1900, and is in good health.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 48. Multipara. Lacerated cervix. Small epithelial cancer of the cervix. Present, Drs. Stone, Hunter and others.

OPERATION, OCTOBER 24, 1894. Vagina scrubbed out by means of a piece of gauze held in sponge forceps, with a liquid preparation compounded by the nurse, consisting of green soap, dissolved in equal parts of alcohol and ether, to which she added about two per cent. of creolin. The external surface around the vaginal inlet was scrubbed with a brush and the same preparation. The hair was shaved off as high as the beginning of the mons veneris. The vagina was now irrigated with hot water and rinsed out with alcohol. An Ouvard speculum was introduced over the perinæum, the cancerous surface

scraped and seared with the thermo-cautery. The cervix was seized with strong forceps and drawn down, two short lateral retractors were introduced, and a third under the anterior wall of the vagina. With the thermo-cautery armed with a curved point, a circular incision was carried around the neck of the uterus, releasing the vaginal from the cervical tissue. With a finger of the right hand the overlying cervical tissues were dissected upwards until the planes of the broad ligaments were exposed. The thumb and finger of the left hand grasped the lower edge of the broad ligament to the right of the uterus, and between them and the uterus, a pair of lock-handled forceps were applied to the ligament, and included the uterine artery. On the opposite side the thumb and index finger of the right hand grasped the exposed portion of the broad ligament, and with the left a pair of lock-handled forceps were applied to the ligament, and included the uterine artery. Between the uterus and the forceps the ligaments were divided with the scissors. The cul-de-sac of Douglas was now opened, as was also the utero-vesical space, the middle portion of each broad ligament was clamped, and divided close to the uterus with the scissors. The fundus of the uterus was now seized with a pair of strong forceps and drawn into the vagina. A pair of lock-handled clamp forceps were now applied to the remainder of the broad ligament on each side, including the ovarian arteries. The ligaments, divided on the inner side of the forceps, including the ovary and tube, were removed with the uterus. A pitcher of hot water was poured into the vagina, which was afterwards carefully mopped out with small balls of sterilized cotton, held in the dressing forceps.

Two sterilized iodoform bandages, each containing four layers of gauze two inches wide and twenty-six inches long, one of them having a silk ligature tied around its extreme end, were now inserted in the following manner: The bandage with the silk ligature tied around its end was fed into the pelvis until the

end tied with the ligature was all that was left of it in the vagina. The second bandage was fed into the vagina in and around the forceps. A self-retaining catheter, rubber, was passed into the bladder. The presenting ends or handles of the forceps were surrounded by three turns of a strip of absorbent cotton, and over this was tied a sterilized silk ligature, binding in a firm mass, the forceps included in the cotton, and also securing the cotton from displacement. The patient was placed in bed, a two-grain opium suppository was introduced into the rectum. The limbs of the patient were secured as follows: Each limb was drawn up, bent at the knee, and laid upon a pillow placed horizontally with the edge of the mattress. A broad bandage was passed under the pillow and over the limb, the tails of the bandage were then tied around the side rail of the bed. The end of the catheter was inserted into a glass urinal, and two or three bags of hot water were placed in the bed.

At the end of forty hours the limbs were untied, the urinal removed, and the patient was lifted out on a short table, covered with a double blanket and a pillow. Her hips were close to the end of the table, and her feet rested upon supports fastened to the corners of the table. Seated in front of the pelvis, the patient now in the lithotomy position, and a good light from the window falling upon the pelvis, with carbolized solution, a supply of sterilized cotton balls, and a short perineal speculum, the removal of the forceps proceeded as follows: The ligature securing the cotton surrounding the forceps was severed and the cotton removed. With a piece of gauze in a sponge-holder, the surface surrounding the forceps was carefully cleansed with a five per cent. solution of carbolic acid. The bandage in the vagina was carefully withdrawn and the vagina was mopped out about the forceps with cotton balls. Each pair of forceps was now unlocked and carefully removed. The vagina was now mopped out with the cotton balls dipped in.

the carbolic acid solution. The end of the bandage still in the pelvis with its attached silk ligature, which distinguished it from the bandage removed, was seized with a pair of forceps, and about fourteen inches of it drawn into the vagina. About eleven inches of this was cut off with the scissors, leaving three inches protruding into the vagina. A strip of fresh iodoform gauze was passed to the top of the vagina behind this protruding strip and a second piece in front of it. The speculum was withdrawn, the catheter having already been removed, and the patient was returned to bed, her limbs left untied. Concentrated liquid nourishment was continued, and the patient was permitted to rest upon the back or side at will. At the close of the fourth day, or a few hours earlier, the patient was again placed on the short table before the window, Ouvard's speculum was introduced, after the vulva and surrounding surface had been washed with an antiseptic solution. The two strips of gauze placed in the vagina, surrounding the protruding end of the upper bandage, were first removed with the forceps, and a little moisture was wiped up from the vagina with cotton balls. The protruding end of the upper bandage was seized with the forceps and carefully and slowly drawn out. The vagina was again mopped out with cotton balls wrung out of a solution of five per cent. carbolic acid, and a strip of iodoform gauze was introduced into the vagina, loosely filling it. The patient was returned to bed. The nurse was instructed to withdraw the gauze from the vagina at the close of the sixth day and to wash out the vagina immediately afterwards with Thiersch's solution. A purgative was administered, after the action of which the patient was put on a substantial diet. She was sitting up by the tenth day, and returned home on the twenty-first day from her arrival at the hospital.

I have given this case in tedious detail to illustrate some features of the technique of this operation as I observed it done by Dr. Jacobs, of Brussels, two months ago.* Variations in

* Now nearly six years ago.

this method, in accordance with the character of the case encountered, will appear in the detail of future cases.

COMBINED GYNECOLOGICAL OPERATIONS.

Miss —, aged 27. Had a recent attack of appendicitis. Has severe dysmenorrhea, chronic endometritis, salpingitis, ovaritis and attacks of recurrent pelvic peritonitis. Uterus retroverted. Present, Drs. Stone, Hunter and Ohail.

OPERATIONS, OCTOBER 25, 1894. 1st. Dilatation of the cervix uteri and curettage of the endometrium. 2nd. Two and one-half inch incision, right ovary and tube and adherent appendix brought into the wound. Ovary and tube much inflamed. Small patches of lymph over the distal half of the tube. 3rd. Appendectomy. 4th. Removal of the right ovary and tube, followed by careful wiping out of the pelvic cavity with moist sterilized gauze, some hot water being poured in from a pitcher to assist in the cleansing process. 5th. Anterior fixation of the fundus uteri with one deeply buried silk worm gut suture. Wound closed. Time, forty minutes.

Result. Recovered.

Note. The left ovary and tube having been found in fairly good condition, were not removed. I saw this patient again three years later, her general health remained good, and she looked well, but still suffered from dysmenorrhea and a species of chronic invalidism which was more mental than physical. The left ovary and tube left were of questionable advantage to her. Conservatism is difficult of definition.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 33. I removed her ovaries and tubes April 7, 1893. Since then I have curetted her for uterine hemorrhages three times without relief. Present, Drs. Stone, Hunter and Ohail.

OPERATION, OCTOBER 27, 1894. Uterus removed per vaginam.

Result. Out of bed on the seventh day, returned home on the fifteenth day.

Note. The uterus contained nothing which would account for the hemorrhages. She has remained entirely well.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 40. Dysmenorrhea. Frequent attacks of rectal tenesmus. Left ovary prolapsed and adherent in Douglas' cul-de-sac. Right ovary and tube enlarged. Sterile. Diagnosis, specific chronic endometritis, ovaritis and salpingitis. Present, Drs. Stone, Hunter, Ohail and Mercur.

OPERATION, OCTOBER 29, 1894. Uterus and appendages removed per vaginam. Right ovary and tube found much enlarged, left ovary large, tube as thick as the thumb and filled with blood.

Result. Patient up on the seventh day, recovered and returned home at the end of three weeks.

CHOLECYSTOTOMY.

Mrs. —, aged 40. Multipara. Repeated attacks of biliary colic. Patient a physical wreck. Present, Drs. Hunter, Stone and Ohail.

OPERATION, OCTOBER 30, 1894. A one and a half inch oblique incision parallel with the right costal border exposed the well-filled gall bladder, which was emptied of fluid with the aspirator needle and drawn into the wound. An incision was made into its proximal end and two-hundred and forty-two gall stones were removed from the gall bladder and cystic duct. The wound in the gall bladder was stitched to the peritoneum and aponeurosis of the abdominal wound and a rubber tube introduced into the gall bladder. The wound was closed up to the tube with interrupted silk worm gut sutures. Time occupied, thirty minutes. *Result.* Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 48. Obscure pain in the pelvis, almost constant. General wretchedness. The cervix had been amputated some time previously by Dr. X. O. Werder without relief. Present, the residents and Dr. Huselton, senior member of the Surgical Staff.

OPERATION, NOVEMBER 3, 1894. Short median incision, removal of adherent appendages from both sides. Wound closed. Time, twenty minutes.

Result. Recovered.

Note. Between ten and eleven months later she returned to the hospital complaining of a continuance of the same pain in the right iliac region. Careful examination resulted in a diagnosis of chronic appendicitis.

OPERATION, SEPTEMBER 18, 1895. Present, Drs. Stone and McGrew. Short incision at McBurney's point, caput coli found adherent to the right broad ligament and abdominal peritoneum. Adhesions separated and appendix removed. It contained fecal matter. Time, thirty minutes.

Result. Recovered. Subsequent history unknown.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 29. Ovaries and tubes removed for specific, chronic salpingitis and ovaritis, April 24, 1893. Has continued to bleed irregularly and profusely; is slightly insane, with distressing insomnia. Has been curetted several times since first operation, has attacks of recurrent pelvic peritonitis. Present, Drs. Stone, Hunter, Ohail, and Dr. Edebohls, of New York.

OPERATION, NOVEMBER 10, 1894. Vaginal extirpation. Uterus found abnormally soft; endometrium granular.

Result. Prompt recovery. Out of bed on the seventh day,

returned home at the end of three weeks. Gradual improvement in health followed.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 26. Multipara. Laceration of the cervix and introitus vagina. Menorrhagia. Painful anal fissure. Has an almost constant uneasiness in the right iliac region. Suffers much from nausea. The appendix is tender upon pressure. Present, Drs. Stone and Hunter, Dr. Sutton of Zanesville, Dr. Holden, Ohio.

OPERATIONS, NOVEMBER 18, 1894. Patient in the lithotomy position. Vulva shaved, vagina and surrounding cutaneous surface scrubbed with previously-mentioned preparation, irrigated with hot water, vagina rinsed out with alcohol. *Curettage*—Cervix dilated, endometrium thoroughly curetted and cavity irrigated. *Trachelorrhaphy*—The lips of the lacerated cervix were, on both sides, properly denuded by means of Schröder's Catling-shaped knife, and united with interrupted catgut sutures. *Perineorrhaphy*—Crest of the perineal laceration seized with a small vulsellum, carried upward and forward to the vaginal eminence, the vulva widely separated, traction being made outwards from the carunculæ myrtiformes. With Schröder's Catling-shaped knife a curvilinear incision was carried from one caruncula to the other, through the junction of the skin with the vaginal mucosa. The crest held in the forceps was carried by the assistant to the right side of the vagina, and along the crest of the fold made prominent, an incision was carried outwards to the caruncula myrtiformes on the left side of the vagina, and a similar incision was carried to the opposite caruncula. With the crest supported by the forceps at the vaginal eminence, and the introitus widely held open by the hands of the assistants applied to the cutaneous surface, the flap marked out was rapidly dissected away with the knife.

The edges of the wound were now closed as follows: Beginning at the crest, still held in position by the vulsellum, with silk of medium thickness in a short curved needle, the first suture was passed horizontally close to the forceps; it was tied, bringing the edges of the wound together. The vulsellum was removed and the crest supported by the long ends of the suture. The second suture was passed horizontally just below this, and parallel with it, and tied. The long ends of the first suture were cut off and the uncut ends of the second suture were caught up by the assistant. As each succeeding suture was passed the long ends of the preceding one were cut off. This method continued until the last suture bringing the *carunculae myrtiformes* together had been placed. Making slight traction on the long ends of the last suture placed, two or three silk worm gut sutures were placed externally, the long ends of all remaining sutures were cut off. The sphincter ani muscle was now divulsed. The patient's limbs were let down and extended upon the raised extension of the table, and the masts supporting the limbs removed. All hands were rewashed and run through a solution of permanganate of potassium, oxalic acid solution, lime water and distilled water. *Appendectomy*—McBurney's point was located and an incision one inch long was carried down to the fibres of the external oblique muscle. The knife was laid aside. With two pairs of closed sharp-pointed hemostatic forceps the fibres of the oblique and transversalis muscles were pushed aside, exposing the abdominal aponeurosis. This was nipped between two pairs of hemostatic forceps and divided by the scissors. The lips of the wound were held apart by hemostatic forceps placed upon the cut edges of the aponeurosis. The peritoneum was now opened, the appendix carefully sought for and drawn out. The meso-appendix was ligated at the root of the appendix, a small cuff of peritoneum was thrown up around the base of the appendix, which was ligated at its junction with the intestine and cut away. The ligated extremity of

the appendix was depressed toward the lumen of the bowel and covered by means of Lembert sutures with the peritoneum. The stump of the meso-appendix was likewise covered with peritoneum. The abdominal wound was closed with three interrupted silk worm gut sutures, two near the angles and one through the center of the wound. The time occupied in all the procedures was forty minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 26. Chronic invalid. Dysmenorrhea, flow scanty. Uterus infantile. Ovaries enlarged and painful. Present, Drs. Stone, Hunter, Ohail and McGrew.

OPERATION, NOVEMBER 18, 1894. Short median incision, removal of appendages on both sides. Both ovaries were cystic, the left with its tube badly adherent. Wound closed. Time occupied, ten and one-half minutes.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 26. Has had six children at term. Menorrhagia and metrorrhagia. Vaginal examination reveals cancer of the cervix. Present, Drs. Stone, Hunter and Ohail.

OPERATION, NOVEMBER 21, 1894. Circular incision around the cervix with thermo-cautery. Exposure of the broad ligaments, opening of Douglas' cul-de-sac and utero-vesical space. Application of clamp forceps to the broad ligaments, division of the same between forceps and uterus with the scissors. Uterus and appendages on both sides removed. Introduction of strips of iodoform gauze and self-retaining catheter. Handles of forceps secured en masse by surrounding them with a

strip of absorbent cotton secured by ligature. Operation tedious, thirty-five minutes.

Result. Recovered.

Note. December 24, 1900. This patient died from a return of cancer within a year.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 22. Multipara. Lacerated cervix, endometritis, retroversion. Present, Drs. Stone, Hunter and Ohail.

OPERATION, NOVEMBER 26, 1894. Dilatation of the cervix, followed by curetting and irrigation of the endometrium. Division of both sides of the lacerated cervix up to the vaginal attachment with the scissors. The anterior lip of the cervix was seized with a very small vulsellum and drawn forwards and upwards, exposing the cut surfaces. Three-eighths of an inch behind the forceps, with Schroeder's knife, a transverse incision was made across the lip one-sixth of an inch deep. A second incision was made transversely across the cervix below and close to the bite of the forceps. This incision was carried backwards until it joined the first transverse incision, thus removing a layer of hypertrophied mucosa and diseased Nabothian glands. Three fine silk sutures were placed as follows: With a fine curved needle the first one connected the center of the flap with the center of the first transverse incision, one was placed on either side of this, further uniting the flap to the transverse incision, the three sutures occupied a space one-quarter of an inch in width and marked and limited the width of the upper margin of the coming external os. The posterior lip was treated in the same manner. The lateral incisions in the cervix were now closed by interrupted silk sutures. The vagina was irrigated and a tampon of iodoform gauze deposited, surrounding the cervix. The patient was now placed in the dorsal decubitus and anterior fixation of the uterus accom-

plished by means of a single buried silk worm gut suture through a very short median incision. Time, forty-five minutes.

Result. Recovered.

TOTAL VAGINAL EXTIRPATION.

Mrs. —, aged 26. Multipara. Chronic suppurating endometritis, with bi-lateral laceration of the cervix. Present, assistants and Dr. Blackwood.

OPERATION, NOVEMBER 28, 1894. Curettage and disinfection of the endometrium, followed by removal of the uterus without the appendages.

Result. Recovered. Returned home fifteen days after the operation.

TOTAL VAGINAL HYSTERECTOMY.

Mrs. —, aged 38. First and only child born in 1879. Has been an invalid ever since. Cervix lacerated, tenderness in both vaginal fornices. Has had convulsions at each menstrual period occurring during the last year. Present, Drs. Stone, Hunter and Ohail.

OPERATION, NOVEMBER 29, 1894. Uterus and adherent appendages on both sides removed. Clamp forceps. Out of bed on the seventh day.

Result. Recovered. Permanently relieved of convulsions.

COMBINED TOTAL VAGINAL AND ABDOMINAL HYSTERECTOMY.

Miss —, aged 32. Large fibro-myoma. Present, assistants and Drs. Robinson.

OPERATION, DECEMBER 1, 1894. Circular incision around the cervix, short vertical incision with scissors from circular incision to vaginal attachment on both sides of the cervix. Blunt

dissection with the fingers exposing lower planes of both broad ligaments. Application to the broad ligaments on either side the uterus of clamp forceps, including the uterine arteries. Division with the scissors of clamped ligaments between the clamps and uterus. Blunt dissection continued upwards with the finger and closed, blunt scissors opening the cul-de-sac and the utero-vesical space. Simultaneous application of two additional pairs of clamps and division of the corresponding portions of the ligaments. Patient now placed in dorsal decubitus, limbs extended, end of the table raised four or five inches. A free median incision, ligation of the ovarian arteries and infundibulo-pelvic ligaments on both sides and separation with the scissors. Tumor and uterus weighing five pounds lifted out. Peritoneal cavity cleansed. Abdominal wound closed. Extension of the table dropped, limbs flexed upon the abdomen, Ouvard speculum introduced over perineum. Strips of iodoform gauze carried up to the tips of the forceps, filling the vagina, catheter introduced into the bladder, forcep handles surrounded with a strip of absorbent cotton secured by ligature. Time, forty-five minutes.

Result. Recovered.

Note. This patient's mental condition was bad before operation, and while somewhat improved, still very unsatisfactory when she returned home.

APPENDECTOMY.

Mrs. —, aged 57. Nullipara. Has had a grumbling pain in the iliac region, occasionally associated with nausea and tenderness on pressure, for several years. She also has a kidney slightly displaced on the same side. Present, Drs. Stone and Hunter.

OPERATION, DECEMBER 15, 1894. Appendectomy through a very short incision at McBurney's point. The appendix was

hardened by continued interstitial inflammation and its mucosa soft and bathed in a chocolate-colored mucous. Time, twenty minutes.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 34. Multipara. Chronic endometritis, bi-lateral laceration of the cervix, laceration of the introitus vagina, retroversion of the uterus, and painful anal fissure. Present, assistants and Dr. Armstrong.

OPERATIONS, JANUARY 8, 1895. Dilatation of the cervix uteri, curettage and irrigation of the endometrium, repair of bi-lateral laceration of the cervix with bi-conical section, repair of the laceration of the perinaeum, divulsion of the sphincter ani muscle. Extension of the table elevated, limbs extended. Short median abdominal incision and anterior fixation of the fundus uteri, posterior surface to the abdominal wall secured by a single deep and buried silk worm gut suture. Entire time occupied, forty minutes.

Result. Recovered.

OVARIOTOMY WITH SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 69. Has suffered many years from a pelvic tumor, which she requests the removal of, saying that she contemplates marriage. Present, Drs. Hunter, Stone, Husted and Moore.

OPERATION, JANUARY 12, 1895. A fibro-cystic tumor about as large as a cocoanut was found springing from the right ovary and so involving the atrophied uterus that in its removal it seemed best to include the uterus. Both were drawn up into the wound, an elastic ligature was thrown around the base of the mass, which was transfixed by hysterectomy pins above the

ligature and cut away. The stump was fixed in the lower angle of the wound as usual.

Result. Recovered. But failed to get married. Observe the age of the patient.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 38. In October, 1893, her ovaries and both tubes, filled with pus, were removed. Since that date she has continued to have menorrhagia and metrorrhagia. Present, Drs. Stone, Hunter and Ohail.

OPERATION, JANUARY 21, 1895. Two pairs of forceps were applied on each side the uterus, which was separated by the scissors and removed. The uterus contained a small interstitial fibroid, not larger than a hickory nut, imbedded near its right horn.

Result. Recovered, with complete restoration to health.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 22. Married at sixteen. Miscarried two years later in the sixth month of utero-gestation, foetus dead. Infection followed, resulting in a chronic salpingitis and ovaritis. Hoping to save one ovary, I adopted the route with which I was then most familiar and did a laparotomy. Present, Drs. Stone and Hunter.

OPERATION, JANUARY 23, 1895. A three and one-half inch median incision exposed the cavity. The appendages were removed on both sides and the wound was closed. Time, twenty minutes.

Four hours after the operation an excited nurse came running to my house and announced that the patient's pulse was more than 150 and that her temperature was sub-normal. We both ran to the hospital, the young nurse in the lead. Enter-

ing the door held open by the matron, I ran on, leaving my coat on the first flight of stairs and my vest and cuffs on the second. I yelled to a nurse I encountered to bring some hemostatic forceps. I reached the patient's room with my sleeves rolled up and found there two nurses with an almost lifeless patient. I grabbed up a pair of ordinary work-basket scissors lying on the stand, threw one nurse across the patient's legs and a second one across her chest, holding down the patient's arms. From the opposite side of the bed and facing the light, with the work-basket scissors I cut the sutures, thrust my hand into the pelvic cavity and seized the bleeding vessel between my thumb and finger and held on to it. In the meantime the patient, yelling like a Comanche Indian, having been aroused from her stupid condition by pain and excitement, had slipped her forearm down under the nurse and grabbed a handful of small intestines. With my free hand I had to seize her wrist and restrain her hand. Another nurse came with clamp forceps, another with a large basin of clean water, needles, silk, needle-holder, scissors and ether. By this time the patient relaxed her grip upon her intestines and freed a hand for me. I passed down two pairs of lock-handled forceps, secured the vessel, and both my hands were at last free. A hypodermic injection of strychnia and a second of nitro-glycerine were administered immediately. A sponge-holder, gauze pads and a large quantity of boiled water were now brought in from the operating room. I washed my hands, which had on them the ordinary amount of Pittsburg dirt when I began. I turned out of the abdomen a large quantity of clots and liquid blood, applied a fresh ligature to the bleeding vessel, and, having washed out the abdominal cavity with several pitchers of hot water and mopped it dry with the gauze pads, closed the wound. Ether had been administered by a nurse while I proceeded.

There was now time to realize the situation. The patient was in extremis, but a halt on her retirement had been called.

The room looked like a slaughter pen. The first gush of blood when the sutures were cut had bespattered both nurses, my shirt front, and there was blood on the wall back of the head of the bed. The subsequent cleaning out of the peritoneal cavity had filled the bed and saturated the patient's clothing and back hair with blood and water. Patiently and carefully we placed the patient in clean garments and a clean bed, the foot of which was highly elevated. Bottles of hot water were placed about the patient and we entered upon a protracted career of liberal enemata of liquid peptonoids, beef juice, panopepton, somatose, peptonized milk and normal salt solution, hypodermic injections of strychnia and nitro-glycerine. By the mouth, whiskey, liquor ammonia acetatis in combination with muriated tincture of iron, as Basham's mixture, were given for some time. As the days went by color returned to the lips and she began to acquire a new hold on life.

Result. Wound healed with only one stitch hole abscess, which soon healed and the patient made a good recovery.

Three years later this little lady called upon us at the private hospital. She is in splendid health. On May 25, 1901, she remains a healthy, strong woman.

Slipped ligature in the peritoneal cavity is one of the most terrible accidents which can befall any operator. It has occurred in two of my cases, the second of which will appear further along in these notes. In both cases I saved my patients. If such cases are to be saved the vessel must be secured and tied. Stimulating enemata, and hypodermic injections and stimulants by the mouth, given before securing the bleeding vessel, only excite the heart to more rapidly fill the peritoneal cavity with blood and kill the patient. Prompt surgical treatment, regardless of all considerations and future comment, is the only hope for such a patient.

In such cases delay caused by gathering medical men together in consultation is likely to prove fatal, and an abdominal

surgeon who lacks the courage and the skill to make an intelligent effort to rescue a patient from a perilous surgical accident, if called in time, is a poor dependent for those who must undergo intra-peritoneal operations. It is painful to look upon a medical man, who has had the temerity to perform a difficult laparotomy, when a patient is bleeding to death from a slipped ligature, hovering around his dying patient ordering or administering hypodermic injections every few minutes and actually hurrying the patient out of existence, instead of going to work and finding the bleeding vessel and demonstrating that he is a surgeon who is worthy the confidence of his patient.

Intra-peritoneal operations done at a distance from the operator, and followed by the slipping of a ligature from an important vessel, are necessarily fatal.

VAGINAL HYSTERECTOMY.

Miss —, aged 51. Uterine hemorrhages have been of frequent occurrence, and a slight bloody discharge is almost always present. She has been curretted upon four different occasions by competent medical men. Present, Drs. Stone, Hunter, Fisher and Moore.

OPERATION, FEBRUARY 2, 1895. Uterus and appendages removed by vagina. Clamp forceps. Time, twenty-five minutes.

Result. Recovered.

Note. Dr. Jacob Wolf having become the Bacteriologist of the hospital, the uterus was handed to him for examination. He reported the finding in the fundus of the uterus, and involving the endometrium, a sarcoma somewhat larger than a well-developed pea and not quite so large as a well-developed cherry. December 26, 1900. Patient is still living.

Mrs. —, aged 37. Has been married nine years, one child

at term, eight years ago. No miscarriages. She has suffered from menorrhagia for a period of one year. For four years she has had convulsions at the time of her menstrual period. The uterus contains a fibroid growing in the fundus. Present, assistants.

OPERATION, FEBRUARY 13, 1895. Circular incision near the proximal end of the cervix, with lateral incisions at right angles, terminating at the vaginal attachment, followed by blunt dissection with the finger, exposing the lower planes of the broad ligaments, which were clamped and divided between the uterus and clamps on both sides. The cul-de-sac and the utero-vesical space were now opened, and with the applied clamps and the fingers the tissues at the vault of the vagina were stretched somewhat, with a view to getting working room. While Dr. Stone made strong traction on the cervix, I fixed a pair of vulsellum forceps on the fundus, and taking the forceps held by Dr. Stone in my left hand I pushed the cervix into the cul-de-sac while I drew the fundus of the uterus into the vagina. The fibroid was interstitial and as large as a turkey egg, its capsule was incised and the tumor was enucleated. The ovaries were now examined and found to be cystic, while the tubes appeared to be in pretty good condition. The condition of the ovaries precluded any conservatism, and the uterus and appendages were clamped off and removed. The operation occupied fifty minutes.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 25. Sterile. Dysmenorrhea, endometritis and retroversion. Present, Drs. Stone, Hunter and Ohail.

OPERATION, FEBRUARY 20, 1895. Dilatation of the cervix, curettage, very short median incision in abdominal wall, with fixation of the fundus with a single buried silk worm gut suture. Time, twenty minutes. *Result.* Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 37. Normal labor followed by lacerated cervix and infection. Present, assistants.

OPERATION, FEBRUARY 23, 1895. The uterus and adherent appendages removed. Forceps. Time, thirty minutes.

Result. Recovered.

COMBINED GYNCOLOGICAL OPERATIONS.

Mrs. —, aged 28. Dysmenorrhea, endometritis, retroversion. Present, assistants.

OPERATION, FEBRUARY 25, 1895. Dilatation of the cervix, curettage, short median incision, fixation of the fundus uteri with a single buried silk worm gut suture. Time, twenty minutes.

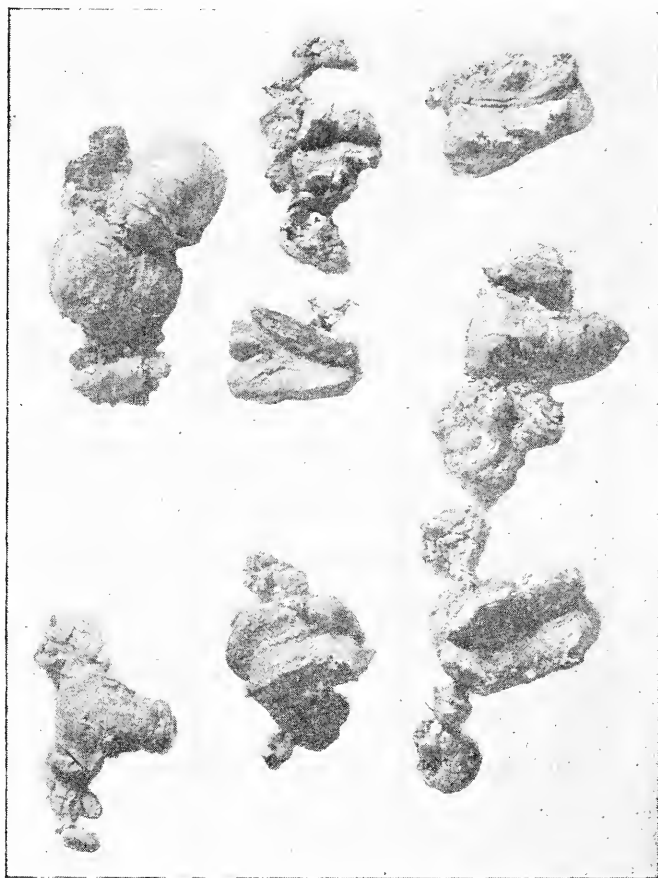
Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 29. Multipara. Lacerated cervix and introitus vagina. Cancer of posterior lip of the cervix. Present, assistants and Drs. Cope, W. D. O'Brien and Le Moyne.

OPERATION, FEBRUARY 28, 1895. Uterus, ovaries and tubes removed. Clamp forceps. Time, six minutes.

Result. On the fourth day after operation soreness and swelling developed in the right parotid gland. A persistent inflammatory process was set up in the gland and terminated in suppuration. The abscess was incised and drained. She returned home at the end of five weeks with a slight discharge still continuing from the parotid abscess. Under the care of Dr. O'Brien, one of our most skilful surgeons, this was soon healed. Died within a year from return of cancer in the pelvis.



SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 36. Sterile. Subject to hysterical convulsions. Multiple fibroids of the uterus. Tumors growing rapidly. Exhaustive menorrhagia and metrorrhagia.

Serious anemia and neurasthenia. Mass consisting of uterus and tumors reaches to the umbilicus. Prognosis doubtful. Bad case. Present, Drs. Stone, Hunter, Ohail and Armstrong.

OPERATION, MARCH 1, 1895. Trendelenburg posture. Hypodermic of one-fortieth of strychnia and one-fiftieth of nitroglycerine. Free median incision, ligation of ovarian arteries on both sides, ligation of round ligaments on both sides, clamp forceps across the tubes. Division with the scissors of upper two-thirds of the broad ligaments, leaving ovaries and tubes attached to the mass. Mass drawn through the wound, ligatures applied to the uterine arteries at the lower angles of the divided broad ligaments, amputation above the ligatures, mass laid aside. Cavity filled with large gauze pads. Table lowered, limbs brought up into lithotomy position, speculum introduced and cervix enucleated. Limbs lowered. Trendelenburg posture resumed, gauze pads removed, cervical opening in the floor of the pelvis was closed with catgut ligature, cavity left perfectly clean, abdominal wound closed. Vagina carefully cleansed and loosely filled with iodoform gauze.

Result. Patient rallied from the anesthetic, was in fairly promising condition throughout the second day, at the end of which the heart began to fail, and she died of exhaustion at the close of the third day. The operation was rapid, completed in thirty minutes.

Note. If confronted with the same case at this time, five years later, I would try before operating to hold the bleeding in check, and by rest and tonics to improve the patient's condition, and especially her heart. These cases of neglected fibroid tumors nearly all present hearts more or less enfeebled. While sepsis will occasionally defeat the surgeon in these cases, its frequency is not to be compared with the frequency with which he is compelled to confront the enfeebled heart. To prevent sudden surprises in such cases I am now in the habit of

persisting with hypodermics of strychnia and nitro-glycerine, given at proper intervals, until the close of the fourth day, and sometimes longer, after operations.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 24. Had gonorrhea before and after marriage. Diagnosis, double pyo-salpinx. Present, Drs. Stone, Hunter and Ohail.

OPERATION, MARCH 9, 1895. Circular incision of the cervix with the thermo-cautery, longitudinal lateral incisions, reaching the vaginal attachment. Upward dissection with the fingers, exposing the broad ligament. Ligament and uterine artery clamped on both sides. Division of the ligaments to the extreme tips of forceps, with the scissors, between the clamps and the uterus. Blunt dissection continued with the fingers and closed blunt scissors, opening the cul-de-sac and utero-vesical space. Fundus of the uterus drawn into the vagina clamp forceps applied to the upper segments of the ligaments on each side of the uterus, and the latter cut out and removed. Through the space thus gained, the ovary and tube from each side were detached, the adhesions having been broken up with the finger. The clamps on the upper segments of the ligaments, having been supplemented by two other pairs, one controlling the ovarian artery on one side, and the other the ovarian artery on the opposite side, were released by dividing the ligamentary tissue, to which was adherent the ovary and collapsed tube on one side, and the ovary and unbroken tube on the other side. The larger pus tube was ruptured in the process of enucleation, about six ounces of foul pus escaping through the vagina. The vagina and pelvis were carefully mopped with small cotton balls wrung out of five per cent carbolic solution. A tube was introduced into the cavity of the pelvis, and it was irrigated from above downwards with hot water. An iodoform bandage

was passed into the pelvis, and a second one into the vagina. A catheter was introduced into the bladder, and the handles of the forceps secured by a strip of cotton and a ligature. Entire time occupied, thirty minutes.

Result. Uneventful recovery.

Note. The patient was out of bed on the eighth day, and on the fourteenth day, carrying a small grip, she walked two blocks to the street cars, and took a railroad train to her home in an adjoining State. She called two years later at my office, and reported prompt recovery of her health, which has continued.

Remarks. The rapid recovery of this case after vaginal hysterectomy is not exceptional. The discomfort after such an operation is, as a rule, limited to forty-eight hours, during which time there is no objection to the use of opiates by the rectum. The patient is not confined to bed, as a rule, beyond eight or nine days. She is able to return to her home in two weeks, and in three weeks is so completely well, that future complications are practically impossible, excepting in cases of malignant diseases.

Now at this date, December —, 1900, the profession are asked to adopt a new method of procedure. It is that of Faure, of Paris, and published with a just claim of joint occupancy by Dr. Howard Kelly, of Baltimore. The method consists of laparotomy in the Trendelenburg posture, followed by bi-section of the uterus, and amputation of its halves, near the vaginal junction; followed by the removal of the appendages from below upwards, with the corresponding half of the uterus, on each side.

First, the operation necessitates a free abdominal incision: second, protracted exposure of the abdominal viscera to the atmosphere, and protracted manipulations, and more or less attrition from the impact of introduction and removal of gauze sponges, instruments and hands; third, bloody ooze from the

site of operation and the margins of abdominal wound, will make wide staining of the intestinal and parietal peritoneum; fourth, the cervix being left in the vault of the vagina, precludes vaginal drainage and may become the site of future malignant disease; fifth, the patient is liable to future ventral hernia, as are all laparotomy patients; sixth, the patient is put to the inconvenience attending an abdominal wound; seventh, she is confined to bed, if she waits for perfect healing, twenty-one days, and the further inconvenience of wearing some sort of an abdominal supporter for six months later. All these objections are incurred apparently for the sake of preserving the neck of the uterus, which in the majority of cases, is already damaged by prior laceration, which in itself, as we well know from experience, invites to the future development of malignant diseases.

When Dr. Kelly makes the assertion that this method of Faure and his own, does away with the advantage which vaginal hysterectomists have held over the laparotomist, I beg to differ with him in toto. To my mind, the difference suggested is the difference between a minor and a major surgical procedure; the difference between little or no shock, and great shock; the difference between a simple and a complicated surgical operation. An additional difference exists, namely: that between brief and protracted anæsthesia.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 30 years. Sterile. Severe menorrhagia and dysmenorrhea. Multiple fibroids. Drs. Stone, Hunter and Ogden.

OPERATION, MARCH 27, 1895. Free median incision, separation of slight omental adhesions, ligation of the upper two thirds of the broad ligament on each side, division of the ligament, pulling out of the mass. Transverse anterior and pos-

terior incisions across the front and back of the uterus, through the peritoneum and cellular tissues, at a point about three-quarters of an inch above the reflection of the bladder. Peritoneal flap on anterior and posterior surfaces pushed down, and blunt dissection with the finger tips and closed scissors, clearing the stump all around, by pushing back the tissues, and ligating the blood vessels. Wedge shaped amputation of the mass between the flaps. Removal of mass. Closure of wedge shaped incision in the top of the stump by interrupted silk sutures, covering the stump by uniting the short peritoneal flaps with catgut suture. The table was lowered, the pelvis emptied of gauze pads, mopped out with moist gauze, and the wound closed. Time occupied, one hour.

Result. Recovered.

Note. The reader will observe that some time has elapsed since I have recorded the use of Kœberle's wire, or the elastic ligature. Professional sentiment has strongly set in toward the adoption of a method which will leave the stump in the pelvis, covered by peritoneum, virtually an extra-peritoneal method. In the Autumn of 1881 I had witnessed Prof. Von Bilioth's efforts in this direction. After dividing the broad ligaments and clearing the way to reach a pedicle of uterine tissue, at about the point where we now divide the peritoneum, he crushed the pedicle with a pair of powerful lock-handled forceps and placed ligature around the crushed tissue; above this the tumor was cut away.

During the Spring months of 1882 I frequently witnessed the operation by Prof. Schröder and Dr. Martin at Berlin. They both labored under the disadvantage of operating upon the patient perfectly flat upon the table, and I believe that the improvement which has come to us in the treatment of fibroid tumors is more to be credited to the Trendelenburg posture than it is to the achievements of any operator since Schröder's time.

In proof of this statement I cite the following case: "Berlin, February 5, 1882. Seven A. M. Morning foggy, gas and lamps lighted in the operating room. Prof. Schröder, two assistants and I present. Patient having a large fibro-myoma, anæsthetized. One assistant opposite Prof. Schröder; I, holding a lamp, shedding its light over the abdomen, stand at his left side. Two nurses take charge of the sponges, water, etc. *Operation*—A long central incision, ligatures placed on both round ligaments and on both ovarian arteries. Broad ligaments divided with the scissors obliquely downwards and inwards to a point near the junction of the lower third of the broad ligament with the uterus on both sides. A large section of the broad ligament, including the ovary and tube, were left attached to the uterus containing the tumor. A rubber ligature was now thrown around the cervix at the bottom of the incision through the broad ligaments and tied, thus constricting the cervix and the uterine arteries on each side. Above the rubber ligature the mass was cut away. Exposed vessels were caught by hemostatic forceps and ligated. The margins of the wedge-shaped opening in the top of the stump were closely stitched together with silk suture. The cut edges of the broad ligament were closed by silk suture and the stump was covered by stitching the peritoneum over it." Suppose that Schröder had had the advantage of the Trendelenburg posture, is it not likely that we would have reached our improved technique in fibroids years before we did? Much stress has laterally been placed upon the bi-section of fibroid tumors and the shelling of the segments from the uterine tissue. The reader will already have observed that I have frequently practiced this method, which I learned of Martin, of Berlin. The following is a case of Martin's, which I saw him do on January, 25, 1882: "The patient, a young woman with an interstitial fibro-myoma of the uterus. *Operation*—A free median incision, small intestine drawn out of the wound and protected by towels wrung out of a hot carbolized

solution. Uterus and tumor pulled through the incision, a rubber ligature is thrown around the neck of the uterus and secured. The uterus and tumor are now bi-sected down to the rubber ligature with a knife. The halves of the tumor were now shelled out. Two smaller fibroids were also shelled out of the walls of the divided uterus. He now ligated the divided halves of the uterus immediately above the constricting rubber ligature, and passing ligatures around the uterine arteries, securing them, and other ligatures securing the ovarian arteries. He cut away the bi-sected halves of the uterus, leaving a wedge-shaped incision, which he closely co-opted with silk ligature and covered with peritoneum."

Here are two cases ante-dating Baer's publication in 1893 of a method of supra-vaginal hysterectomy, which he styles "supra-vaginal hysterectomy without ligature of the cervix, in operations for uterine fibroids. A new method," which let us now analyze with reference to Baer's publication and the more recent announcements on both the bi-section of fibromata and bi-section of the uterus. Schröder secured the ovarian arteries, ligated the round ligaments with their arteries, divided the broad ligaments and cut away the mass above a constricting rubber ligature. He ligated the uterines at the sides of the stump, closed the incision in it with silk suture and covered it with peritoneum. With the patient on a flat table, and the intestines constantly disposed to get in the way, this operation was accomplished. Eleven years later Baer has the advantage of the Trendelenburg posture. He ligates the ovarian arteries en masse with the broad ligaments. He amputates the mass above the reflection of the bladder, as did Schröder. He opens up the broad ligaments adjacent to the uterus and ties the uterine arteries, and completes his operation as Schröder completed his. The Trendelenburg posture enables Baer to dispense with the rubber ligature and to have a clear field for the search for and securing of the uterines. Baer's method was an

improvement on Schröder's, made possible by the Trendelenburg posture. In the publication of Baer's first article, in 1893, he exhibits little knowledge of Schröder's work, and gives him small credit for having originally pointed out with Péan the essential features of what he styles "A new method." I have always accepted Baer's operation as an improvement upon Schröder's, but involving the same principles.

Take Martin's case as detailed and the principle of bi-section of the fibroid is clearly made out and is not one of the latter day improvements in dealing with these tumors.

There should be no stint of credit to Baer for his improvement upon Schröder's operation, an improvement which was bound to follow the Trendelenburg posture in operating; and so far as my personal knowledge extends, Martin is to be credited entirely with the bi-section of fibromata, with or without bi-section of the uterus, in operating. Inasmuch as operators have for a long time been able to displace by blunt dissection all the tissues surrounding the neck of the uterus, including the blood vessels, the time is not far distant when the present method of dealing with the stump in supra-vaginal hysterectomy will disappear, and we will have hysterectomy by the abdominal route without a pedicle. Reference to cases already published in these notes, as well as to the work of other operators, clearly indicates this.

PORRO SUPRA-VAGINAL HYSTERECTOMY.

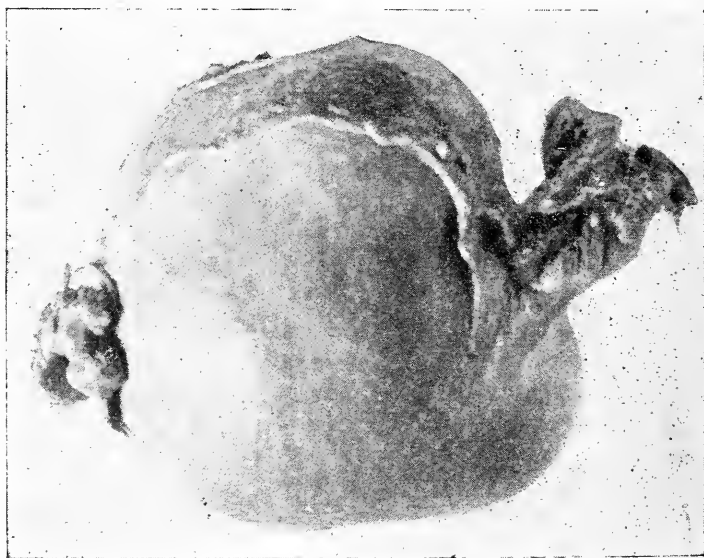
Mrs. —, aged 29. A young woman of fine physique and having a fibro-myoma of the uterus, the importance of which was not estimated, was married ten months ago. She presents herself with a very large abdomen, containing a rapidly growing fibro-myoma. She has not menstruated for eight weeks, and presents the symptoms of pregnancy. Her average daily temperature is $100\frac{1}{2}$, and

pulse rate, 100. Present, Drs. Stone, Hunter, Ohail and McCleary.

OPERATION, APRIL 27, 1895. Position, horizontal, dorsal decubitus. Long median incision, reaching above the umbilicus. Separation of slight omental adhesions. The free end of the tumor was brought through the wound. A careful examination revealed the fact that the tumor developed from the posterior and lateral wall of the uterus, and had split open the right broad ligament, in which its base rested. The right broad ligament reflected over the base of the tumor, was split open with the scissors, making it possible to withdraw the mass still further through the abdominal wound. The assistant carried the exposed end of the mass well toward the patient's right side, exposing the left side of the mass, with the left broad ligament. The uterine side of the ligament was secured by a pair of clamp forceps, including the tube. Strong silk ligature was passed through the ligament low down on the side of the uterus, and including the uterine artery. It was tied, including the infundibular ligament and ovarian artery. The ligament was divided above the ligature with the scissors. The tumor was now carried toward the patient's left side, and its base was shelled out from the broad ligament and it was also detached from the uterus and laid aside. The uterine artery on the right side was now ligated. Amputation of the uterus was made above the vaginal attachment. The split broad ligament was closed by a continuous catgut suture, which was extended across the cervix, covering it with peritoneum, the end of the suture being secured upon the opposite side. The cavity of the pelvis was now filled with gauze pads, and the abdominal wound was closed by interrupted silk worm gut sutures, down to and including the umbilicus. The end of the table was elevated, placing the patient in a decided Trendelenburg posture, and the gauze pads were removed. The field of operation was carefully mopped out with fresh moist gauze pads, and the end

of the table lowered, the patient again resuming the horizontal position. A pitcher of hot water was poured into the abdominal cavity, mopped out, and the wound closed with interrupted silk worm gut sutures. Time, one hour. *Result.* Recovered.

Note. The tumor without the uterus weighed ten pounds. December 27, 1900. This patient remains in perfect health, but at this date, after five years of further experience, if I were obliged to deal with a similar case, I would attempt to save the uterus. But the recovery of the patient from so serious a condition, has completely justified the operation. The uterus contained a foetus of probably six or eight weeks development.



MYOMA.



PREGNANT UTERUS AND MYOMA.



TUMOR BELONGING TO PREGNANT UTERUS.

PORRO SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 28 years. Married with a growing fibroid tumor, and is now three and one-half months pregnant, and is suffering considerable pain. The top of the mass reaches just to the umbilicus. Present, assistants and Dr. McCready.

OPERATION, MAY 9, 1895. Long median incision, mass drawn out through the wound, found to consist of the pregnant uterus, and a large fibroid deeply imbedded and growing by a very broad base from the fundus of the uterus. Flat sponges introduced into the pelvis and lower abdomen, protecting the intestines. The hips were elevated by raising the end of the table about ten inches. A pair of lock handled forceps were placed across the Fallopian tube at either side of the uterus. The upper two-thirds of the broad ligament, including the ligamentum infundibulo-pelvicum, with the ovarian artery, were ligated and divided on both sides. A transverse incision was made across the face and another across the back of the uterus, above the reflection of the bladder, and two flaps of peritoneum were pushed down. Between the flaps the cervix was separated from the mass by a wedge shape incision, and the entire mass laid aside. The cervix was seized by a pair of strong cervix forceps, supported by the assistant, Dr. Stone, there being no bleeding of any moment, the edges of the wedge shaped incision were closely coapted with silk, and the peritoneal flaps were united over the stump with catgut. All remaining sponges were removed from the abdominal cavity, the field of operation properly cleansed, and the wound carefully coapted, was closed by means of catgut step suture, and transverse interrupted silk worm gut suture, passed before introducing the step suture.

Result. Recovered.

Note. This is the third case the reader will find in this collection of notes in which I have done the Porro operation

upon the pregnant uterus, on account of large and rapidly growing fibroid tumors. It marks as far as my knowledge goes, the third successful case in the United States, all being my own. The only other case in the United States was that of Prof. D. Hayes Agnew, done August 16, 1880, which was unsuccessful.

Supra-vaginal hysterectomy for fibroid tumors, was twice done in Western Pennsylvania, prior to my first case on the twentieth of February, 1884. The first of these was done by the late Dr. George McCook, in February, 1866. He was a very old man when I located in Pittsburg in the Autumn of 1866.

A woman applied to him for relief of a very large abdominal tumor, which he supposed was of ovarian origin. He opened her abdomen and removed the tumor, and then discovered that it consisted of a large fibro-myoma, and the uterus containing a foetus at about three and one-half months. The patient succumbed to the operation. The specimen may be found in the Army Medical Museum at Washington. This was the only Porro operation which had at that time been done in Pennsylvania, and the only one in the United States prior to Agnew's operation in 1880. My three operations followed these in the following order: The first on May 23, 1891; the second on April 27, 1895; and the third on May 9, 1895. All were successful and at this date, December 29, 1900, they are all living.

In addition to this supra-vaginal hysterectomy done by Dr. George McCook, under a misapprehension, a second supra-vaginal hysterectomy for fibroid tumor of the uterus, in this instance uncomplicated by pregnancy, was done in Western Pennsylvania prior to my first operation, February 20, 1884. This operation was done by Dr. John M. Duff, assisted by his father. He made a supra-vaginal hysterectomy on account of a large

fibro-myoma, on June 6, 1874, at Newtonsburg, in Westmoreland County. This case, like that of Dr. McCook, died.

My first case, done on February 20, 1884, was the first successful supra-vaginal hysterectomy for fibroid tumor done in Western Pennsylvania, and will be found recorded in these notes.

Prior to 1866 there were two other notable laparotomies undertaken by Pittsburg surgeons. The first of these was by the late Dr. James Speer, in 1826. With some of his contemporaries in that year, in a small frame house which stood on Sixth street, between Penn avenue and Duquesne way, he made preparations to attempt the removal of an ovarian cyst. He completed an incision opening the abdominal cavity, but satisfied himself by taking a look at its contents, and closed the wound. This was Dr. Speer's first and last attempt to do ovariectomy. He told me, only a few years before his death, in relating this case, that at the time he made the attempt he was not aware that McDowell, of Kentucky, had done the operation successfully.

From 1826, and before that date, until 1842, there was not a case of ovariectomy in Western Pennsylvania. The Atlees, Drs. John and Washington L., began operating in the Eastern part of the State in the year I was born, 1841. In 1856 Dr. Thomas St. Clair, of Indiana, Pa., completed the operation on a young woman in that town, the patient dying on the fourth day. Prior to this date, Washington L. Atlee had acquired an extensive reputation as an ovariectomist, and Dr. St. Clair had derived his information concerning the operation from him. This I know from the fact that five years later I copied the correspondence between Drs. Atlee and St. Clair with reference to the latter's case. I am inclined to believe that Dr. St. Clair was the first operator in Western Pennsylvania.

The second case in Allegheny County of abdominal section, to which I have referred as remarkable, was done by the late

Dr. A. G. Walter. He was a German, had been a student of Dieffenbacher, and was the most prominent surgeon of his time in this city. Dr. Walter was called to see a man who had fallen from an upper window, sustaining severe shock. Passing a catheter he found the man's bladder empty, and diagnosed a rupture of the viscus. Assisted by Dr. Karl Emmerling, who is still living and one of Pittsburg's most accomplished physicians, he opened the abdomen, sought for and inspected the wound in the bladder, and passed a sponge into the abdominal cavity, and withdrew the sponge, and closed the abdominal wound, and put a catheter into the bladder, retaining it there for several days. The bladder wound was not sutured. This was the first abdominal section for traumatic rupture of the bladder probably ever accomplished. It has never been repeated in Western Pennsylvania so far as I know.

Cotemporary with this German surgeon there were in Pittsburg a number of surgeons of extraordinary merit, a number of whom, including Dr. Walter, removed ovarian tumors by laparotomy prior to June, 1875, date of my first operation. Notable among these surgeons whom I knew personally was Dr. John Dickson, afterwards succeeded by two sons, Joseph and John, now deceased; Dr. George McCook and Dr. A. M. Pollock. These men are all deceased. Among the many prominent physicians who were cotemporary with these men was the late Dr. James King, who did his first and only ovariectomy in 1879 or 1880, and in which he was assisted by Dr. F. Le Moyne and myself. Dr. F. Le Moyne belonged to my own generation of doctors, although a few years older; and up to the time of his retirement from practice, at a recent date, by reason of ill health, continued to be one of the leading surgeons of the city of Pittsburg. Cotemporary with Dr. Le Moyne, another cotemporary of great merit and reputation, I think older than either of us, Dr. James McCann, like Dr. Le Moyne, was a general surgeon, frequently doing abdominal surgery. He has

been succeeded by his son. Dr. James McClelland, of the homeopathic school, performed his first laparotomy in 1876.

Specialism in gynecological and abdominal surgery was inaugurated in Pittsburg by myself in the Autumn of 1883, when I established a private hospital for the purpose. I operated this institution successfully for more than sixteen years, during which time my professional efforts were extended almost exclusively to pelvic and abdominal surgery in women. During the last five years of the existence of the private hospital, which was known as "Terrace Bank Sanitorium for Women," which had proved successful, and a school for those who attended operations in it, the public hospitals of these cities had immensely improved their buildings, adding greatly to the number of their private rooms; and had also developed many competent operators, associated with these hospitals as gynecologists and abdominal surgeons on their respective staffs.

Since the discontinuance of my private hospital on December 1, 1899, I have associated myself with the Passavant Hospital of the city of Pittsburg, with which institution I was connected from 1876 to 1881, and in which I conducted the first gynecological clinic established in Pittsburg, and which was interrupted by my residence abroad during the two subsequent years.

I have seen the subject of abdominal surgery in Western Pennsylvania develop from the simple performance of ovariectomy to the performance of operations upon all the viscera of the abdominal and pelvic cavities, and I have been an active participant in that development. Intra-peritoneal operations are now common property and are undertaken by all surgeons.

SUPRA-VAGINAL HYSTERECTOMY WITH CYSTOTOMY.

Mrs. —, aged 31. Has been an invalid for several years, until about three years ago, when the uterine appendages were removed, and an anterior ventral fixation of the

fundus uteri was made. After which she enjoyed good health until eight or nine months ago, when she began suffering from irritability of the bladder. I saw her in consultation with Dr. King, who thought it probable that a buried suture in connection with the former fixation, might be causing the irritation. A circumscribed painful spot existed immediately above and close to the symphysis pubis. A finger in the vagina detects a circumscribed solid mass, lying above and involving the upper end of the urethra, and adjacent section of the upper wall of the bladder. From the history of the case, the vesical symptoms were increasing in severity, and I inferred that this was due to a progressive growth of the mass felt, and decided to attempt its removal. Present, Drs. Stone, Hunter, Eastman and King.

OPERATION; MAY 6, 1895. The original wound for the removal of the appendages had not exceeded two inches in length, and contained no cicatricial tissue. Following the line in the skin I cut down to the peritoneum, and carefully incised the latter. I found the upper end of the mass felt by the vagina; (the bladder had been washed out with an antiseptic solution, and was now entirely empty) some sterilized gauze was passed through the wound and behind the uterus, the fundus of which was still fixed anteriorly. I exposed the presenting portion of the mass above the pubis and found it continuous with the wall of the bladder, and adherent also to the sub-pubic triangular ligament and other soft tissues in the pubic triangle. A careful dissection continued under the pubic symphysis in the direction of the urethra, enabled me to draw up the mass, a portion of the bladder and urethra following, into the wound, and also to determine that the upper edge of the mass was adherent to the uterus on the left side. The cut surface of the mass looked very much like tubercular tissue. The uterus was disengaged from it and allowed to sink into the pelvis. The mass was now dissected

out, and the opening left in the front of the bladder and upper end of the urethra, was carefully closed with continuous catgut suture. Fearing that the mass was tubercle and having been attached to the uterus, I drew the latter into the wound and made a supra-vaginal hysterectomy. The pelvic cavity was cleared of protecting gauze, some hot water was poured into it and wiped out, and the wound closed.

Result. Patient recovered, and still remains well, after a period of more than five years.

Note. No trace of suture material was found in the mass.

COMBINED ABDOMINAL AND VAGINAL HYSTERECTOMY.

Mrs. —, aged 44. Was married early in life, and became the subject of specific infection. Has remained sterile. Her appendages are glued up en masse on both sides of the uterus, and very adherent. The case probably badly suited for either vaginal or abdominal hysterectomy singly. Present, Drs, Stone, Hunter, Ohail and Rugh.

OPERATION, MAY 17, 1895. Patient in the lithotomy position. A circular incision of the overlying cervical tissue with the thermo-cautery. Lateral incision with the scissors from the circular incision, to the vaginal attachment. Blunt dissection with the finger and closed blunt scissors, exposed the lower planes of the broad ligaments, which, including the uterine arteries, were clamped with lock handled forceps, and divided. Blunt dissection was continued opening the cul-de-sac, and the utero-vesical space. The speculum was withdrawn, the extension of the table elevated, the masts removed, leaving the patient in the dorsal decubitus. She was now placed in the Trendelenburg posture, and the abdomen opened by a median incision. The adherent appendages were torn loose from strong adhesions to the pelvic tissues. Ligatures were placed surrounding the infundibulo-pelvic ligament and the ovarian art-

tery. The remainder of the broad ligaments were severed and the uterus and appendages removed. The patient was lowered to the horizontal position and the cavity of the pelvis and vagina were irrigated with hot water poured in through the abdominal wound, which was afterwards closed. The patient's limbs were now elevated, some strips of iodoform gauze were passed into the pelvis from below, and also some into the vagina. The speculum was removed, a catheter passed into the bladder, the handles of the forceps surrounded by a strip of absorbent cotton and a ligature. Time occupied in the operation, one hour and forty-five minutes.

Result. Recovered, with subsequent restoration to good health.

Note. The specimen removed consisted of the uterus, the right tube minus the ovary, which was searched for and not found, and the left ovary and tube, the former large and cystic, the latter filled with pus.

LAPAROTOMY FOR TUBERCULAR PERITONITIS.

Mrs. —, aged 56. Diagnosis, tubercular peritonitis. Abdomen is full of ascitic fluid, the uterus is fixed, the roof of the pelvis solid. Kidneys secreting insufficiently. Patient much emaciated. Present, Drs. Stone, Hunter and Hobbs.

OPERATION, MAY 22, 1895. Central median incision; evacuation of twenty-four pints of ascitic fluid. Examination reveals wide spread tubercular infection of the intestines, with tubercular deposits filling the pelvis. The cavity of the abdomen was thoroughly flushed out with hot water, and the wound closed.

Result. The wound healed and the patient returned home, somewhat more comfortable, on June 17th.

Subsequent History. Died of tuberculosis four months later.

COMBINED OPERATIONS.

Miss —, aged 26. Had been an invalid for several years, with rectal disease, dysmenorrhea and menorrhagia. Retro-displacement. Present, Drs. Stone, Hunter, Ohail and Welsh.

OPERATION, JUNE 6, 1895. Curettage of the endometrium, anterior fixation of the fundus uteri. Removal of four hemorrhoids by Allingham's method.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 44. Diagnosis by Dr. O'Brien, multilocular ovarian cyst. Present, Drs. Stone, Hunter, Holman and O'Brien.

OPERATION, JUNE 7, 1895. Median incision, separation of superior, slight adhesions with the hand introduced through the wound. Reduction of mass with the trocar. Withdrawal of the collapsed cyst, ligation and division of the pedicle. Ovary on the left side found cystic and removed. Pelvis flushed out and wound closed. Time, forty minutes.

Result. Recovered.

POSTERIOR COLPOTOMY.

Mrs. —, aged 44. Multipara. Menorrhagia, ovaries prolapsed and larger than normal. Present, Drs. Stone, Hunter and Ohail.

OPERATION, JUNE 14, 1895. Patient in lithotomy position. Ouvard's speculum over perinæum. Dilatation of the cervix, curettage of the endometrium. Uterine and vaginal cavities irrigated. Incision posterior to the cervix, opening Douglas' cul-de-sac; ovaries and tubes drawn down into the incision, ligated and removed. Strip of iodoform gauze for drainage

passed through the incision into the cul-de-sac. Time, thirty minutes.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 39. Had repeated attacks of pelvic peritonitis during the first four years of her married life. Remained a widow for some years and then re-married. She has suffered with pelvic disease during the last seven years, during which time she has frequently been under my care. She has had every advantage of modern gynecological treatment. Two years ago a serious break occurred in her health, and an intractable insomnia has persisted for several years. The pelvis is tolerably well filled with a uterus containing a fibro-myoma, and diseased appendages. After consulting eminent gynecologists far from her home, she has decided to have her uterine appendages removed. The anæsthetic selected was A. C. E. mixture; it was carefully administered by Dr. Ohail and badly taken by the patient, who at no time was profoundly under its effect. Present, assistants.

OPERATION, Dr. Stone assisting Trendelenburg posture. Median incision. The tail of the omentum, the sigmoid flexure of the colon, and the fundus of the uterus, containing a fibroid, were adherent en masse; these were carefully separated and some omental vessels ligated. An examination of the appendages revealed the fact that they were adherent on both sides and that the left tube was large and contained fluid, and that the uterus contained at least two fibroid tumors.

At this moment in the operation I halted and sent out for her representative to come into the operating room. I asked for permission to remove the uterus in addition to the appendages, and was refused permission to do it.

I separated the adherent appendages upon both sides of the uterus and removed them. The fimbriated ends of both tubes were glued to their respective ovaries, which were adherent to the posterior surfaces of the broad ligament and the floor of the pelvis. There was hydro-salpinx on the left side. The removal of the appendages was followed by persistent oozing, which was finally controlled by hot gauze sponges packed in the pelvis. When the abdominal wound was closed at the end of one hour a glass drain tube was left in its lower angle. The tube was removed at the end of fifteen hours.

Result. The patient was passing gas at the eighteenth hour and at intervals until the close of the twenty-sixth hour. In the twenty-ninth hour after operation she vomited for the first time. Forty-one hours after operation her pulse was 84, her temperature $100\frac{1}{3}$. No gas was heard passing during the last fifteen hours, and there was no distension of the abdomen. At the end of forty-four hours after operation severe vomiting began, pulse 108. In the forty-eighth hour she vomited duodenal contents, and it was now clear that there was an intestinal obstruction, which was suspected four hours earlier, and vigorous efforts from that moment had been directed toward its relief. From the forty-eighth to the fifty-fifth hour there was no vomiting, but the pulse had risen to 148. It was now four P. M., and she had not vomited for seven hours. At the fifty-fifth hour a severe paroxysm of vomiting occurred. Observing that the paroxysms of vomiting were occurring several hours apart, I did not regard the urgency of the symptoms as sufficiently grave to demand re-opening the wound.

At five P. M., the close of the fifty-sixth hour, the pulse was ranging between 145 and 150. I had no doubt of the existence of an obstruction, probably an incomplete Littre hernia, from the fact that the vomiting was occurring at long intervals. There was very slight distension. If gas was being generated and not extending the abdomen to any extent, some of it must

be passing the obstruction. With these views I had postponed opening the wound until I was now suddenly confronted with a rapidly-failing heart. About seven or eight o'clock a consultation was held. The pulse had risen to 160, and I felt convinced that it was too late to hope for anything by re-opening the wound. She died at nine P. M., sixty hours after the operation. The immediate cause of death was undoubtedly heart failure, precipitated by the severe paroxysm of vomiting which occurred five hours earlier, and was the third paroxysm in which duodenal contents had been ejected.

The first paroxysm occurred in the forty-fourth hour, the second in the forty-eighth hour, and the third in the fifty-fifth hour. With a reliable heart there would have been plenty of time to have opened the wound and sought for the obstruction, with a fair hope of bringing relief to the patient, but a weak heart was the immediate cause of death.

Autopsy. The autopsy was limited to the examination of the abdominal cavity. A loop of the ileum ten or twelve inches from the ileo-cecal valve was found bent upon itself, or as we say, kinked, the sides of the gut being adherent to one another. This is what I understand to be known as a Littre hernia, forming in most instances an incomplete obstruction.

Above the obstruction the ileum was distended and below the obstruction the ileum was collapsed. About the constriction there was a well-marked peritonitis, which did not extend beyond the loop of intestine involved, the general peritoneum of the cavity being free from inflammation.

LAPAROTOMY FOR CHRONIC APPENDICITIS.

— —, aged 29. Recurrent appendicitis during last two years. Has lived on liquid diet for one year. Present, Drs. Stone and Babb.

OPERATION, AUGUST 29, 1895. A three-quarter inch incision at McBurney's point. A non-adherent appendix was se-

cured and drawn out of the wound and appendectomy completed and the wound closed. The appendix was five inches in length, almost as solid as the tail of a rat, and its surface was hyperæmic. When split open its tissues gave evidence of a chronic, interstitial inflammatory process, while its mucosa was soft, could be easily rubbed off, and a trace of fecal matter was found in the cavity of the appendix.

Result. Recovered.

Subsequent History. For several years after the operation there was slight uneasiness occasionally occurring and referable to the site of the removed appendix. During the last two years there has been no complaint.

LAPAROTOMY FOR PAR-OVARIAN CYST.

Mrs. —, aged 35. Multipara. Slow growing cyst in the lower abdomen, fluctuation distinct. General health unimpaired. Present, Drs. Stone, Babb, Lichty and Shaw.

OPERATION, SEPTEMBER 7, 1895. Three inch median incision. One gallon of fluid about as clear as spring water drawn off with the trocar. The trocar hole was split on both sides with the scissors to the extent of two inches, making a four inch incision. The lining membrane of the cyst was carefully separated from the external covering of the cyst, all around the margin of this incision. The enucleation of the lining membrane thus started was continued some distance with the fingers, when the released portion of the lining membrane could be grasped securely, when the external membrane was then pushed back over it, with a small gauze pad held in the fingers, this process continuing until the entire lining membrane was shelled out and removed. The pelvic cavity was mopped out with moist gauze, the covering membrane of the cyst left behind, and the wound closed.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Miss —, aged 35. Multiple fibroids, mass reaching to the umbilicus. Present, Drs. Stone, Hunter, Lichty and Kniffler.

OPERATION, OCTOBER 1, 1895. Median incision, Trendelenburg posture. Ligation of round ligaments, ligation of infundibulo-pelvic ligaments, ligation of upper two thirds of both broad ligaments, division of the same with the scissors. From a point an inch above the reflection of the bladder a transverse incision was carried across the front of the uterus, and a corresponding one across the posterior surface of the uterus, and two flaps of peritoneum were turned down. The cervix was now amputated by a wedge-shaped incision between these flaps. The uterine arteries were secured, the incision in the uterine tissues closed by interrupted silk suture, and covered by flaps of peritoneum, secured by catgut suture.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 24. Specific infection, followed by chronic salpingitis and ovaritis. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, OCTOBER 11, 1895. Removal of uterus and adherent appendages by the vagina. Clamp forceps.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 35. Multiple fibroids, filling the pelvis, reaching almost to the umbilicus. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, OCTOBER 18, 1895. Trendelenburg posture. Median incision. Ligation and division of the broad ligaments,

withdrawal of the tumor, turning down of an anterior and posterior flap of peritoneum, and amputation of the cervix between the flaps, ligation of uterines, covering of stump with peritoneal flaps, closure of abdominal wound.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —. aged 32. Specific infection in 1888, pus tubes removed five years later. Has had continuous menorrhagia and been curetted several times since. Present, Drs. Stone, Hunter, Kniffler and Shaw.

OPERATION, NOVEMBER 5, 1895. Two pairs of clamp forceps placed on either side of the uterus. Division of the ligaments with the scissors, and withdrawal of the uterus.

Result. Recovered.

Mrs. —, aged 35. Chronic ovaritis and salpingitis, of four years standing. Present, Drs. Stone, Hunter, Pettit and Lauthen.

OPERATION, NOVEMBER 15, 1895. Uterus and appendages removed. Clamp forceps. Operation completed in ten minutes.

Result. Recovered with a uretero-vaginal fistula.

Note. Some time subsequently I had Dr. Howard Kelly repair the fistula. The injury was not discovered at the time of the operation, and how the accident happened has always been a mystery. Since recording this case I have closed a uretero-vaginal fistula following a vaginal operation by one of my colleagues.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 37. Multiple fibroids. Tumor reaches the umbilicus. Present, Drs. Stone, Hunter, Kniffler, Bennett and Pettit.

OPERATION, NOVEMBER 20, 1895. Median incision, ligation and division of broad ligaments, amputation of cervix between flaps of peritoneum, securing of arteries, suturing of the floor of the pelvis, clearing up the field of operation, closing abdominal wound.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 68. Has an enormous tumor which has been twice tapped. Present, Drs. Stone, Hunter, Ansley and Turnbull.

OPERATION, DECEMBER 2, 1895. Median incision. Cysts reduced by the trocar. Extensive adhesions broken up, and mass removed from the cavity. Pedicle ligated with catgut ligature, and grasped above the ligature by Baker-Brown's clamp, on the upper surface of which, it was burnt off with the cautery iron. Peritoneal cavity cleaned up and wound closed. Cysts and contents weighed sixty-three pounds.

Result. Recovered and returned home in three weeks.

Note. December 31, 1900. Patient still living.

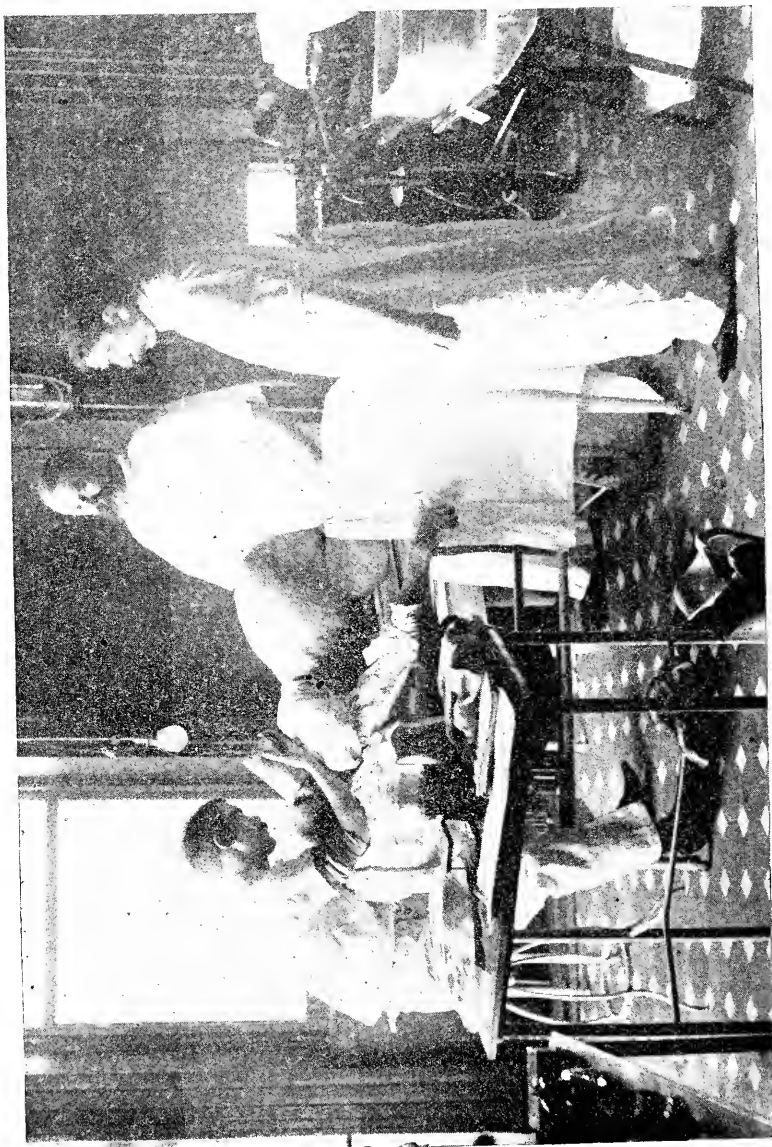
Miss —, aged 46. Large multilocular ovarian cyst. Present, Drs. Stone, Kniffler and McCance.

OPERATION, DECEMBER 7, 1895. Free median incision, the pedicle tied with catgut, and divided with the cautery. Wound closed. Time, nineteen minutes.

Result. Recovered.

Mrs. —, aged 44. Discovered an abdominal tumor in 1887, nine years ago. Recently it has become quite large. A few days ago she fell down stairs, she is very sore and her temperature has risen. Ruptured cyst suspected. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, JANUARY 8, 1896. Median incision revealed a multilocular ovarian cyst, one compartment of which was ruptured, the fluid flowing from the abdominal wound. The cyst



was removed and pedicle ligated and divided by the thermo-cautery. The cavity was flushed out with 1.16000 sublimate solution, followed by distilled water.

Result. Recovered.

Note. Dr. Wolf made a microscopical examination of some of the fluid which had escaped from the ruptured cyst, and found it contained no pus germs.

Statistics.

The following note appears in the note book at the close of this case: "Last one hundred intra-peritoneal operations done in the private hospital gives ninety-five recoveries and five deaths, and the last one hundred done in the private hospital, public hospitals and at the homes of the patients gives ninety-two recoveries and eight deaths."

APPENDECTOMY.

Mrs. —, aged 26. Had an acute attack of appendicitis in May, 1895, and was married a month later. From the time of the attack she has been an invalid, growing more helpless from week to week, losing flesh continually, and having a daily elevation of temperature and pulse. A mass occupies the right inguinal region; it can be reached by the finger from the vagina, and is tender. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, JANUARY 9, 1896. A four-inch incision, oblique, passing through McBurney's point, exposed the mass. It was found to consist of an agglutination of the caput coli, a portion of the ileum, vermiform appendix, right ovary and tube, and over this the adherent tail of the omentum. These structures were patiently separated; the appendix, the right ovary and tube containing pus, also four inches of the omentum, were removed. Iodoform gauze was placed in the pelvic cavity, and in the lower abdominal cavity, to keep separated

and to drain the surfaces formerly adherent. This gauze packing was removed forty-eight hours later through the lower angle of the wound, which had been left open. The operation consumed one hour.

Result. Recovered.

Note. The case was tubercular. May 25, 1901. Patient living, but far advanced in tubercular disease.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 30. Multipara. At her first labor she sustained a bi-lateral laceration of the cervix and a laceration of the introitus vagina. For two years her general health has been breaking. Present condition, endometritis, menorrhagia, proctitis with anal fissure, retroversion of the uterus, obstinate insomnia and melancholia. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, JANUARY 12, 1896. First—Curettage of the endometrium. Second—Trachelorrhaphy. Third—Perineorrhaphy. Fourth—Divulsion of the sphincter ani muscle. Fifth—Anterior fixation of the fundus uteri by laparotomy. Time—Forty-five minutes.

Result. Recovered, with eventual restoration to health.

Note. For two years after recovery from her surgical operations she remained under the skilful medical treatment of Dr. Ayers. May 25, 1901. Reported in excellent health.

NEPHRORRHAPHY.

Mrs. —, aged 37. Diagnosis, floating kidney. Present, assistants and others. Anaesthetic by Dr. Kniffler.

OPERATION, FEBRUARY 17, 1896. An oblique incision, three inches in length, was made, starting from the lateral border of the erector-spinae muscle, one-half inch below the lower

border of the twelfth rib, and extended downward and forward toward the anterior superior spinus process of the ileum. The skin, fat, fascia, latissimus dorsi, external oblique, internal oblique, and transversalis muscles were divided. Upon division of the deep layer of transversalis fascia, or lumbar aponeurosis, the fatty capsule of the kidney was exposed; this was opened by blunt dissection and the superfluous fat was removed. The kidney was now brought into the wound and secured well up under the rib by two buried silk worm gut sutures passing through the cortical substance of the kidney and the aponeurotic and muscular edges of the wound. Capillary drainage was secured by means of silk worm gut threads made to traverse the entire length of the wound, which was closed by continuous catgut, step suture. Time spent in operation, twenty minutes.

Result. Wound healed by first intention and patient left the hospital with the kidney in good position.

COMPLETE PROCIDENTIA UTERI.

Mrs. —, aged 37. Multipara. Present condition has existed for several years. Health much broken. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, FEBRUARY 18, 1896. The uterus having been replaced in the pelvis a short median incision was made in the abdominal wall, and the fundus of the uterus was anchored at and below the lower angle of the wound with two buried silk worm gut sutures, and the wound was closed. The patient was now placed in the lithotomy position, with the end of the table (Boldt's) raised five or six inches. With Schröder's Catling knife a strip of the anterior vaginal wall, three-eighths to a half inch in width and extending its entire length, was dissected off, and the edges closed with interrupted silk sutures, placed one-eighth of an inch apart, throughout the entire length of the

wound. An incision was now begun in the axis of the posterior wall, at a point corresponding to a line uniting the middle and upper third of the vagina. This incision was carried obliquely downward and outward, terminating at the left caruncula myrtiformis. A second incision was started at the same point at which the first incision began, and was carried obliquely downward and outward, terminating at the right caruncula myrtiformis. A third incision, slightly curvilinear, was made from one caruncle to the other, following the junction of the skin and vaginal mucosa. The triangular portion of the posterior wall of the vagina, thus mapped out, was dissected off, and the space thus left was closed by uniting the edges of the wound from above downward with interrupted silk sutures, one-eighth of an inch apart, continuing downwards to the caruncula. A long, thin, curved needle, armed with heavy silk, was now passed at a single sweep deeply through the edges of the perinæal wound, the needle was removed, and for the moment the ends of the ligature were left untied. A few interrupted silk sutures were now placed uniting the wound from the caruncula myrtiformis to the posterior commissure of the wound on the perinæal surface. The deep binding suture was now tied across the closed perinæal wound. She was kept in bed eighteen days.

Result. Recovered, with a permanent cure.

TUBERCULAR PERITONITIS.

Miss —, aged 12. The little daughter of a farmer whose cows died or were killed on account of tuberculosis two years ago. Within three years this child, who drank a great deal of the milk of these cattle, became ill. Her general health and flesh failed rapidly, while her abdomen became very large and contains a large quantity of fluid. She looks like a little skeleton attached to a large abdo-

men. Her pulse range is 140 and her temperature is 103. Diagnosis, tubercular peritonitis. Present, Drs. Stone, Hunter, Wells and Letherman.

OPERATION, FEBRUARY 27, 1896. Median incision in the abdominal wall between the umbilicus and pubic symphysis. Evacuation of a large quantity of ascitic fluid, followed by irrigation of the peritoneal cavity with hot normal salt solution, the residuum having been mopped out with gauze pads on a sponge-holder, the wound was closed by interrupted silk worm gut suture. Time occupied, twenty minutes.

Result. Recovered. She remained in the hospital seven weeks. Her cough disappeared, and it was estimated that she had gained from fifteen to twenty pounds. She returned home and continued to improve throughout the following summer and winter, when she developed tuberculosis of both lungs, to which she succumbed twenty-five months after the operation. There was never any return of the disease in the peritoneal cavity.

Note. Unless this case can be catalogued under the head of singular co-incidences, it is one where the infection is traced directly to the consumption of the milk from tuberculous cattle.

OVARIOTOMY.

Miss —, aged 28. Menorrhagia with dysmenorrhea. Pelvic tumors supposed to be ovarian, notwithstanding that they seem to be movable with the uterus, and no fluctuation can be detected. A diagnosis of uterine fibroids was made some months ago, but I dissented from this view, believing the tumors to be ovarian. Present, Drs. Stone and Kniffler.

OPERATION, FEBRUARY 29, 1896. Trendelenburg posture. Free median incision, revealing a tumor as large as a cocoanut, free from adhesions, growing by a pedicle from the right ovary.

The pedicle was ligated and divided with the thermo-cautery. A second tumor, as large as a lemon, sprang from the left ovary, and was adherent in the cul-de-sac. It was shelled out of its bed, its pedicle ligated and divided with the thermo-cautery. The patient was lowered to the horizontal position. The pelvis flushed out with normal salt solution and the wound closed as follows: Transverse interrupted silk worm gut sutures were first passed; the edges of the aponeurosis were united with a continuous catgut suture, and the interrupted silk worm gut sutures were now tied.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 28. Two miscarriages followed by septic endometritis, salpingitis and ovaritis. Present, assistants.

OPERATION, MARCH 15, 1896. Circular incision of the cervix with the cautery. Lateral incision on each side of the cervix from circular incision to the vaginal attachment. Blunt dissection with the finger exposing the lower planes of the broad ligaments, application of clamp forceps to the exposed ligaments and uterine arteries on each side; division of the ligaments close to the uterus with the scissors; continuance of blunt dissection with the fingers and closed blunt scissors, opening the cul-de-sac and the utero-vesical space, splitting up of the anterior wall of the uterus, traction being made on the uterus by forceps grasping the edges of the incision and being moved step by step and the incision being extended with the scissors as the uterus advanced, the fundus of the uterus coming forward into the vagina as the incision reached it. Application of two pairs of forceps across the remaining portion of the broad ligament and tube on each side of the uterus at the horns, uterus cut out between the forceps. Separation of adherent appendages and the placing upon each side of a pair of clamp forceps, seizing the

remaining portion of the broad ligament, and including the ovarian artery, with the infundibular ligament on both sides. Division with the scissors of the ligamentary tissues on the inner side of the last two pairs of forceps, releasing the forceps placed at the horns of the uterus, with the appendages on each side. Strips of iodoform-gauze were passed to the tops of the forceps. A catheter was introduced into the bladder, the handles of the forceps were secured together with a strip of absorbent cotton and a ligature.

Result. Recovered.

VAGINAL EXTIRPATION.

Mrs. —, aged 38. Multipara. Cancer of the cervix. Present, assistants, and Drs. Rankin and Maurier.

OPERATION, MARCH 17, 1896. Extirpation of the uterus. Clamp forceps.

Result. Recovered.

Record.

Between this case and the following one in the note book, I find this note, referring to the intra-peritoneal operations which I had completed up to this date: Laparotomies, three hundred and seventy-four; vaginal hysterectomies, thirty-four; posterior colpotomies, two; total, four hundred and ten.

ANTERIOR COLPOTOMY—DUHRSEN.

Miss. —, aged 28. Has chronic salpingitis and ovaritis, with a small interstitial fibro-myoma in the anterior wall of the fundus uteri. Severe menorrhagia with dysmenorrhea. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, MARCH 21, 1896. Patient in lithotomy position. The cervix was seized with strong forceps and drawn down into the vaginal orifice, the forceps depressing the per-

inæum, the anterior vaginal wall was seized with a volsella at the eminence below and near the urethral opening, and drawn upward. The anterior wall was not stretched. With Vineberg's knife an incision was carried through the anterior wall of the vagina, from the vaginal eminence to the vaginal attachment to the cervix. Partly by blunt dissection with the finger and partly by the scissors, the vaginal wall was separated upon both sides of the incision from the bladder. The lower angle of the flaps, those at the cervical end of the wound, were now held apart, and the uterus and bladder were separated. The index finger was now introduced into the peritoneal cavity, and by a to-and-fro motion the space between the uterus and bladder was further increased. A vaginal retractor was now introduced between the bladder and uterus, and held by an assistant. The cervix uteri was now carried backwards into the fornix of the vagina, and a traction suture was passed through the anterior uterine wall, and with a little manipulation the fundus came into the vagina. The adherent appendages were now separated on either side, ligated and removed. The small fibroid, interstitial, in the anterior wall of the fundus could be felt, and could have been removed by myomectomy. The uterus was now replaced within the cavity of the peritoneum, and was secured to the vaginal wound by means of a running catgut suture, with which it was closed. The vagina was loosely packed with iodoform gauze.

Result. Recovered. Discharged in fourteen days.

Note. January 2, 1901. This patient was soon enabled to resume her occupation, recovered her health, is now well, without a trace of her fibroid tumor. Had I not considered it necessary to remove her appendages, I would have made a myomectomy. But I did not consider it necessary to do both, and the subsequent history of the case has proven that I was right. My experience leads me to this conclusion, that unqualified denunciation by authors, of the removal of the appendages for

the cure of fibroid tumors of the uterus, is unjustifiable. A short time before performing this operation, I saw Dr. Vineberg perform it very beautifully, at St. Marks Hospital in New York.

APPENDECTOMY.

— —, aged 25. Has had repeated attacks of appendicitis, characterized by severe pain in the inguinal region, radiating to the umbilicus and even to the xiphoid cartilage. Nausea and vomiting and an elevation of temperature and pulse, with local tenderness over the region of the appendix vermiformis. Six months ago I advised appendectomy, but the advice was not acted upon. Two weeks ago an attack occurred while visiting friends in Philadelphia, and the physician whose name I have unfortunately forgotten, urged an operation, which was also declined by the patient. The patient arrived in Pittsburg, at the home of a friend two days ago, and was again seized with an attack of appendicitis. I was called to see the case yesterday, and urged an immediate operation, which was done to-day. Present, assistants and Dr. Wakefield.

OPERATION, MARCH 25, 1896. A two inch incision parallel with the external edge of the rectus muscle, and crossing the root of the appendix at McBurney's point, was made. The appendix was found adherent in horse-shoe shape, to the posterior surface of the ascending meso-colon, and was detached. The meso-appendix was ligated and separated. A cuff of peritoneum was thrown up around the base of the appendix, which was ligated with silk, and amputated close to the ligature. The stump of the meso-appendix and appendix were covered with peritoneum, and the wound closed by interrupted silk worm gut suture.

Result. Recovered.

DOUBLE OVARIOTOMY AND SUPRA-VAGINAL HYSTERECTOMY, FOR
FIBROID.

Miss —, aged 26. Pelvis and lower abdomen have been filling up with an ovarian cyst on the right side, a fibroid tumor in the uterus, and an apparently enlarged ovary on the left side. Present, assistants. Anæsthetic by Dr. Kniffler.

OPERATION, MARCH 25, 1896. Median incision, breaking up of slight adhesions with the hand introduced through the wound. Reduction of ovarian cyst with the trocar, delivery of the same, ligation of the pedicle with catgut ligature, and division of the pedicle with the thermo-cautery. Patient elevated to Trendelenberg posture. The left ovary, as large as an orange, was drawn up its pedicle ligated and divided with the thermo-cautery. The uterus containing a fibroid tumor larger than a goose egg, was now isolated, and amputated between two flaps of peritoneum, at the beginning of the supra-vaginal cervix. All blood vessels having been ligated with catgut, and the stump covered with peritoneum, and the peritoneal cavity having been cleaned up, the abdominal wound was closed, with catgut step suture. Time occupied, one hour.

Result. Recovered.

SUPRA-VAGINAL HYSTERECTOMY.

Mrs. —, aged 42. Multipara. Multiple fibroids filling the pelvis, and lower abdomen. Present, Drs. Stone, Hunter and Kniffler.

OPERATION, APRIL 4, 1896. Trendelenberg posture. Median incision, ligation of round infundibulo-pelvic ligaments. Lock handled clamps across the uterine side of the broad ligaments, downward division of the latter, with the scissors. The mass pulled up out of the pelvis. On the right side a fibroid as

large as an orange was found lying under the broad ligament, and was shelled out of its bed. An incision was continued across the front of the uterus, dividing the peritoneum, about an inch above the reflection of the bladder. A similar incision was carried across the posterior surface of the uterus, the flaps were pushed down by blunt dissection, and the cervix was amputated between them, and the uterine arteries ligated. The incisions in the peritoneum were now united by a continuous catgut suture. The protecting gauze sponges were now removed from the cavity, and the wound was closed with running catgut suture, uniting the edges of the aponeurosis, and through and through interrupted silk worm gut sutures.

Result. Recovered.

Note. The uterus contained twelve fibroids.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 48. Multipara. Some years ago incurred a laceration of the cervix and introitus vagina. In addition at the present time has retroversion, also a proctitis with an anal fissure. Present, Drs. Stone, Hunter and Babb.

OPERATION, APRIL 10, 1896. First—Curettage of the endometrium. Second—Trachelorrhaphy. Third—Perineorrhaphy. Fourth—Divulsion of the sphincter ani muscle. Fifth—Short median incision, followed by anterior fixation of the fundus uteri, at and below the lower angle of the wound, by two buried silk worm gut sutures. Closure of the wound with interrupted silk worm gut sutures. Time occupied, fifty minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 29. First labor eighteen months ago. Supposed that she was pregnant again, and not being confined

at what she thought was full time, I examined her two days ago, and found she had an ovarian cyst. Present, Drs. Stone, Hunter, Babb, Whitten and Van Kirk.

OPERATION, APRIL 20, 1896. Short median incision, tapped and delivered a large non-adherent, unilocular cyst. Pedicle ligated with catgut and divided with the Pacquelin cautery. The other ovary being found cystic, was also removed, its pedicle being treated in the same manner. Wound closed with interrupted silk worm gut sutures. Time occupied, thirty minutes.

Result. Recovered.

VAGINAL-HYSTERECTOMY.

Mrs. —, aged 28. Repeated abortions, menorrhagia, neurasthenia. Pelvic tumors. Present, Drs. Stone, Hunter, Babb, Morrison and Van Kirk.

OPERATION, APRIL 23, 1896. Uterus and appendages removed by vagina. Clamp forceps. Uterus found soft, containing a fibroid, interstitial, as large as a lemon, with fungoid growths on the endometrium. The right ovary contained a cyst as large as a hen egg. On the left, chronic interstitial salpingitis and ovaritis. Time, thirty minutes.

Result. Recovered.

Note. On the margin of the note book, this case is marked as my four hundred and sixteenth intra-peritoneal operation.

RADICAL OPERATION FOR THE CURE OF INGUINAL HERNIA.

Miss —, aged 21. Hernia has been in existence for several years. The sac occupies the inguinal canal. Present, Drs. Stone, Hunter and Babb.

OPERATION, APRIL 23, 1896. A short oblique incision, parallel with the axis of the canal, was made, dividing the skin, the

sub-cutaneous tissue, the aponeurosis of the external oblique, and transversalis muscles, exposing the hernial sac. The sac was opened, its contents restored to the abdominal cavity. The sac was now well separated from the floor of the canal, and margins of the internal ring; ligated and cut away, outside of the ligature. The round ligament occupying the ring was re-sected and removed, and the margins of the ring and the immediate layers of the tissue forming the walls of the ring, were closely approximated with buried kangaroo tendon. The more superficial structures of the incision were united with interrupted silk worm gut suture.

Result. Recovered.

Note. Not having been able to keep trace of this patient, I can say nothing with reference to permanent results.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 42. Multipara. Chronic invalid. Endometritis, laceration of the cervix, uterus prolapsed and retroverted, introitus vagina lacerated. Present, Drs. Stone Hunter, Babb, Whitten and Van Kirk.

OPERATIONS, APRIL 25, 1896. First—Curettage of the endometrium. Second—Bi-conical section of the cervix uteri. Third—Perineorrhaphy. Fourth—Anterior fixation of the fundus uteri by laparotomy. Time occupied in operating, thirty minutes.

Result. Recovered.

Note. In cases similar to this, after the age of 40 years, I believe that total vaginal hysterectomy is a good operation, inasmuch as it affords the greatest protection for the future. Only a limited number of patients however are willing to accept it

SALPINGO-OÖPHORECTOMY AND MYOMECTOMY.

Mrs. ——— aged 28. Dysmenorrhea, menorrhagia, neurasthenia, hysteria. Fibroid tumors. Recurrent pelvic peritonitis. Present, Drs. Stone, Hunter and Babb.

OPERATION, APRIL 30, 1896. Median incision, removal of appendages on both sides. Division of the capsule, and shelling out of the fundus of the uterus, a fibroid tumor, the size of a lemon. Suture of the wound in the capsule of the tumor. Closure of the abdominal wound. Time, thirty minutes.

Result. Recovered. Subsequent complete restoration to health, and disappearance of all mental symptoms.

SALPINGO-OÖPHORECTOMY.

Miss ———, aged 18. Repeated attacks of hysteria during the last two years. Frequent at the menstrual periods. Examination reveals an enlarged and tender right ovary. Present, assistants and Drs. Kniffler and McCready.

OPERATION, MAY 9, 1896. Right ovary found enlarged and cystic and removed. The left ovary and tube seemed to be normal and were not removed.

Result. Recovered.

Note. The uterus was found to be infantile. Had she not been a young girl, I would have removed the left ovary and tube also, which I undoubtedly should have done. This patient returned to the Hospital February 9, 1897, suffering from hystero-epilepsy and a chronic ovaritis and salpingitis on the left side. Not caring to open the very short abdominal wound which was made in the first instance, I made a vaginal hysterectomy, removing the small uterus, and the remaining ovary and tube in six minutes.

Note. The patient made a prompt recovery, and was rapidly restored to perfect health, which has been permanent.

OVARIOTOMY AND SUPRA-VAGINAL HYSTERECTOMY.

Miss —, aged 42. Upon examination this patient is found to have an ovarian cyst and a uterine fibroid, with a large quantity of free fluid in the abdomen. Present, assistants and Dr. Kniffler.

OPERATION, MAY 9, 1896. Free median incision, escape of a large quantity of ascitic fluid. An adenomatous, semi-solid, multilocular ovarian cyst, free from adhesions and with a long pedicle, was removed from the left side. Removal of the cystic ovary and tube on the opposite side, with supra-vaginal amputation of the uterus. The uterus contained an interstitial myoma, which was as large as a small cocoanut. Time, forty minutes.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 46. My first knowledge of this patient occurred in 1869, when she was under the professional care of my revered partner and colleague, the late Dr. Thomas F. Dale, of Allegheny, Pa., for an obstinate and long continued menorrhagia and metrorrhagia. In April, 1872, I curetted the endometrium, my first case, and the first in Allegheny County. The result of the curetting was that after four years of almost constant bleeding she was cured for the time being. Without having had any return of her trouble she married about three months later and went to live in a distant community. Her marriage was followed by the birth of three children, the last one born in 1883. In 1889 she returned with menorrhagia and was curetted and relieved for some time. She returned and the curetting was repeated, with temporary relief, once a year, until the Spring of 1896, when she had been curetted

six times since the birth of her last child. Microscropical examinations had been made of the scrapings, from year to year, without giving the evidences of malignant disease. In the Spring of 1896 the uterus was large and heavy, its cavity measuring four and three-quarter inches, and as she was now forty-six years of age and bleeding freely, I advised against another curetting and in favor of vaginal hysterectomy. Present, assistants and Dr. McEwan.

OPERATION, MAY 21, 1896. The uterus and appendages were removed, the ligaments being secured with clamp forceps. Examination of the specimen—Of the large uterus there was corporeal endometritis, the walls were hard and stiff. The cavity of the endometrium was unusually large, the mucosa or endometrium proper was thick, succulent and dotted with circumscribed red patches. The right ovary was as large as a hen's egg, and cystic. The tube was filled with clear serum, hydrosalpinx. The left ovary was abnormally small, and the corresponding tube thick and hyperæmic. The operation lasted thirty minutes.

Result. Recovered, with complete restoration to health, which has been permanent.

APPENDECTOMY.

Miss —, aged 26. For two years has had an uneasiness, referable to the region of the appendix. Has had occasional attacks of nausea without vomiting. Pressure over the appendix, which can be made out under the fingers, causes pain.

OPERATION, MAY 23, 1896. Very short incision at McBurney's point through the skin, fat and superficial fascia, followed by separation of the muscular fibres by blunt dissection, and exposure of the abdominal aponeurosis. This was picked

up between two pairs of hemostatic forceps and divided, as was also the peritoneum. The appendix was found non-adherent, drawn through the wound, the meso-appendix ligated and cut off at its base. A fold of peritoneum was turned up around the base of the appendix, which was ligated and divided within the fold, and covered by the latter. The stump of the meso-appendix was also covered by the peritoneum. Abdominal wound closed. Time, twenty minutes.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Miss —, aged 25. Retroversion with dysmenorrhea and menorrhagia. Present, assistants.

OPERATION, JUNE 1, 1896. Curettage of the endometrium. Very short median incision, and fixation of the fundus uteri by means of buried silk worm gut suture.

Result. Recovered.

LAPAROTOMY, OVARIOTOMY, PAN-HYSTERECTOMY, RE-SECTION OF INTESTINE.

Mrs. —, aged 41. Multipara. Nine years ago this patient consulted me for the first time; she had a large bleeding fibro-myoma. I advised a supra-vaginal hysterectomy, which advice was not favorably received. Her general condition at that time was good enough to warrant an operation, with a fair prospect of success, and there were no complications. I have not seen her again until four days ago, when she presented herself, a physical wreck, and seeking relief by operation. Her condition is as follows: The abdomen is much distended with a large uterine fibro-myoma, and an ovarian cyst. Her temperatures are running high, her pulse is rapid and feeble, and she is having

heavy sweats. She gives the history of several attacks of colic, which I interpret to have been attacks of peritonitis. She is evidently septic. I discouraged her husband by giving a very unfavorable prognosis. If I had considered myself in the case, instead of possibly one chance in a hundred for the woman, I would have refused to extend any further services to her. As the case stood, death not long deferred, was bound to ensue. On the other hand, the prospects of an operation done in her condition, which could not be improved, were very discouraging. But I finally decided that if there was a chance in a hundred, she was entitled to it, and moreover, while there is nothing to be lost in the death of such a case, save its effect upon statistics, and upon other dilatory patients, an occasional recovery may result even in such cases. I concluded to attempt her relief by surgical procedure. Present, Drs. Stone, Hunter and Babb.

OPERATION, JUNE 3, 1896. I will not burden the reader with the long, tedious details, but will relate what was encountered and what was accomplished. A long median incision exposed the abdominal cavity. Immediately extensive adhesions of the omentum and small intestines, to both the myoma and ovarian cyst, were encountered and separated, and many ligatures applied. Further parietal adhesions to the ovarian cyst were broken up with the hand. The cyst, which was multilocular, and weighing eight or ten pounds, was broken down with the trocar, and drawn out of the wound, its pedicle, long and slender, was ligated and divided with the thermo-cautery. It had now become evident that the corresponding right tube contained a large quantity of what was probably pus, and a loop of the small intestine was adherent to it. It was also discovered that this tube was firmly adherent to the anterior abdominal wall, above Poupart's ligament. An effort to separate the loop of ileum from it resulted in tearing a hole in the gut,

which seemed to be almost incorporated with the wall of the tube. Two inches of the ileum were cut out, and the ends were united by means of a Murphy button. Further investigation developed the fact that the left tube was also full of pus. Cutting between double ligatures, I worked my way down to the cervix, and cut the latter out of the vault of the vagina and removed the uterus and its fibro-myoma, weighing seven pounds. After a lot of tedious work I got out the pus tubes, rupturing the right one in the effort to separate it from the abdominal wall. At the parietal attachment of the right pus tube, the pus had burrowed through the upper adherent cyst wall, the parietal peritoneum, and later on we discovered that it had reached the muscular tissues. It was evidently making for a subsequent pointing above Poupart's ligament. The abdominal cavity was carefully cleansed, the flaps of peritoneum sewed carefully together over the vaginal opening, and the vagina was loosely filled with iodoform gauze. The abdominal wound was closed, the patient put to bed and transfused.

Result. Died five hours later of shock. The patient was on the operating table one hour and forty-five minutes.

Note. The diagnosis as far as it went in this case was perfectly accurate. The ovarian cyst and fibro-myoma and the results of repeated attacks of peritonitis, were all found in evidence. The co-existence of double pyo-salpinx was not suspected, but the burrowing of the pus from the right tube into the tissues of the abdominal wall on the right side, was the source of sepsis, the symptoms of which, prior to operation, were unmistakable. If the operation had been uncomplicated by the co-existence of the pyo-salpinx on the right side, the operation would have been shortened very materially, the resection of the intestine would have been saved, and the septic condition of the patient would have been wanting,—so that in this unusually complicated case, one pus tube alone, by its

conditions, led to the failure to save her life, or at least this is not improbable.

Autopsy. By Dr. Jacob Wolf, Bacteriologist to the Hospital: Examination confined to the abdominal and pelvic cavities and abdominal wall. There had been no subsequent hemorrhage, the pelvic cavity contained ten ounces of normal salt solution, slightly tinged with blood, no more than the patient would readily have absorbed had she lived. A dissection of the abdominal wall at the point where the right pus tube was adherent, showed that the pus had burrowed its way to the underlying fibres of the internal oblique muscle.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 42. Multipara. One abortion. Cervix and introitus vagina lacerated. Corporeal endometritis. Left chronic salpingitis and ovaritis. Uterus retroverted, prolapsed. Menorrhagia. Present, Dr. Stone, Hunter, Babb, and Dr. Donald Moore, of New York.

OPERATION, JUNE 20, 1896. Uterus and appendages removed by the vagina. Clamp forceps. Time, fifteen minutes.

Result. Recovered. This I regard as an instance of conservatism guarding against future malignant disease.

Note. A memorandum on the margin of the note book says: "The four hundred and twenty-ninth intra-peritoneal operation."

OVARIOTOMY.

Miss —, aged 42. Abdomen has gradually enlarged until now, when it is about equal in development to that found at a full term pregnancy. An examination of the breasts reveals distinct enlargement of Montgomery's papules, and the breasts contain fluid, which is easily expressed at the

nipple. A vaginal examination reveals an unruptured hymen. With the finger in the vagina the cervix uteri is found to be virginal, and the body can be made out lying to one side and behind the base of the fluctuating pelvic tumor. Diagnosis, ovarian cyst. Present, Drs. Stone, Babb and others.

OPERATION, JUNE 26, 1896. Three-inch median incision, non-adherent cyst, rapidly reduced with large trocar and delivered, pedicle tied and burnt off. Abdominal wound closed with interrupted silk worm gut sutures. Time, sixteen minutes.

Result. Recovered.

EXPLORATORY LAPAROTOMY.

Miss —, aged 52. For about one year the patient has been failing in health and losing flesh. The surface of the abdomen is scaphoid. A nodulated mass as large as the fist is felt back of the umbilicus, and is freely movable in the abdominal cavity. She has no cachexia, nor any enlargement of the liver or deposit in her lungs. Her urine is normal. Either malignant or tuberculous disease of omental glands is suspected. Present, Drs. Stone, Babb and T. D. Davis.

OPERATION, SEPTEMBER 1, 1896. A median incision four inches in length was made between the ensiform cartilage and umbilicus and the tumor exposed. It consisted of enlarged omental glands and was adherent to the transverse colon and a loop of small intestine, and at once gave the impression of malignancy. An examination of the under side of the right lobe of the liver revealed a nodule of cancer with a reddish granular surface, a little smaller than a half dollar. Abdominal wound closed.

Result. The patient was still living six months later. Died of cancer of the liver and peritoneum.

OVARIOTOMY.

Mrs. —, aged 43. Multipara. Diagnosis by Dr. Sharpneck very large multilocular ovarian cyst. Present, Drs. Stone Babb and Sharpneck.

OPERATION, SEPTEMBER 23, 1896. Median incision, separation of extensive adhesions, omental, intestinal and parietal. Reduction of the mass with the trocar, by tapping several large cysts. Delivery of the tumor ligation and division of the pedicle with the thermo-cautery. Springing from the left ovary a second multilocular cyst, as large as a cocoanut, was drawn up, its pedicle ligated and divided. The pelvic cavity was flushed out with normal salt solution, two gallons of solution probably having been used. The abdominal wound was closed with catgut continuous suture, uniting the edges of the aponeurosis, and through and through interrupted sutures of silk worm gut. Time, fifty-eight minutes.

Result. Recovered.

Note. She is referred to in the following letter: "Jefferson, Pa., December 28, 1900. Dr. R. S. Sutton. Dear Sir, your's of December 18, at hand, and contents noted. As to Mrs. —, I am glad that I can report her still living, and enjoying good health, no indication of return of tumor. I can also report Mrs. —, who preceded Mrs. —, and Mrs. —, who preceded her, as having made good recoveries and enjoying very good health. Respectfully, T. H. Sharpneck."

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 75. For about one year a movable mass about as large as a fist, or possibly a little larger, has been felt within the abdominal cavity just below the umbilicus. It is suspected that the growth is malignant, and that it is

developed in the omentum. Present, Drs. Stone and Banks.

OPERATION, SEPTEMBER 24, 1896 Short median incision below the umbilicus reveals a malignant tumor in the omentum, and adherent to the intestines. Wound closed. Time fifteen minutes.

Note. Several such cases have been recorded in these notes already, and the records of some others will follow. Exploratory incisions lead to definite information, and they entail scarcely any risk to the patient. Occasionally, they are followed by a successful operation, and the life of the patient is thereby saved.

To those who have objected to exploratory incision, I have sometimes said that they might be termed ante-mortem examinations, by reason of which, a patient's life is occasionally saved, and from which nobody dies. But I have added that, I had not so far learned of a patient who had recovered from a post-mortem examination.

ANTERIOR COLPOTOMY.

Mrs. —, aged 35. Has been married about fifteen years, and has remained sterile, and is now insane. An examination per vaginam discloses a chronic endometritis, salpingitis and ovaritis. She has suffered intensely from dysmenorrhea for many years, and her mental condition is worse at the time of her menstrual periods. Present, Drs. Stone, Hunter and Babb.

OPERATION, SEPTEMBER 29, 1896. The cervix uteri was seized with a pair of strong cervix forceps, and drawn down to the posterior commissure of the introitus vagina, the forceps depressing the perinæum. The vaginal eminence just below the orifice of the urethra was seized with a small pair of vulsellum forceps, and traction was made upon the forceps by the assistant, in an upward and outward direction. The anterior vaginal

wall thus put upon the stretch, was divided along the presenting ridge of its whole length, exposing the bladder. The edges of the incision were, with the finger and knife, pushed backwards while the bladder was pushed out of the way with the finger, until the utero-vesical fold of peritoneum was exposed. This was opened. The forceps at the vaginal eminence were removed, two fingers were introduced together in front of the uterus, into the cavity of the pelvis, and separated widely. A strong traction ligature was passed through the fundus of the uterus. While traction was made upon this ligature, the cervix was pushed back into the posterior fornix of the vagina, and the fundus came into the latter. After an examination of the ovaries and tubes, I decided to make a total hysterectomy, which was easily accomplished, ligatures being used to secure the ovarian and uterine arteries. The wound in the anterior wall of the vagina was closed with catgut suture. The ligatures controlling the ovarian arteries were cut short. Those controlling the uterines were left long, and protruded into the vagina, which was filled with iodoform gauze.

Result. She was sitting up at the end of eight days. A day or two later she was found hanging out of a third story window, holding on to the inside of the window sill with her hands, at that instant she was discovered by an able-bodied nurse, who reached out of the window and seizing her by the hair, lifted her in. She was then removed to the second floor and carefully guarded. When left alone, she was secured in a "straight-jacket." Notwithstanding this care, she eluded the nurse and jumped out of the second story window, alighting on soft ground and sustaining no injury beyond a slightly sprained ankle. For about five weeks after her operation, she was sustained by forced feeding with a stomach tube. It took three or four nurses to feed her upon each occasion when nourishment was required. During the following three weeks her mental condition improved, and she took nourishment willingly when

it was offered. During the seventh and eighth weeks, Phospho-albumen was added to her nourishment in full doses, three times a day, at the end of eight weeks she had so far recovered as to make it undesirable to detain her any longer at the hospital. Before her operation it was arranged that after her recovery from it, she would be removed to an institution where she could be properly taken care of and treated, for an indefinite period, short or long. She was therefore removed to St. Francis Hospital and placed under the care of Dr. Diller or Dr. McKennan, where her medication by phospho-albumen and other remedies was continued, for two or three months, when she returned home apparently well.

Subsequent History. Since her return home she has remained perfectly well.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 52. At the menopause developed hallucinations, which continue and grow more frequent. Vaginal examination reveals a uterus enlarged and containing a small fibroid. She also has chronic salpingitis and ovaritis, with an adherent right ovary. Present, Drs. Stone, Hunter, Babb and Henry.

OPERATION, OCTOBER 2, 1896. The uterus, both tubes and right ovary were removed. But two pairs of clamp forceps were used; these controlled the uterine arteries. The left ovary, in the attempt to draw it and the tube down, after a ligature had been placed upon the artery behind it, became detached entirely and slipped away into the cavity of the abdomen and was not found again. Above the points of these two pairs of forceps the opening into the peritoneal cavity was closed with catgut suture. Some iodoform gauze was placed in the vagina and a catheter in the bladder, and the patient was put to bed.

Result. Recovered with a small vesico-vaginal fistula, which I subsequently closed. The uterus contained four small fibroid tumors.

Note. The lost ovary in this case was never heard of, proving conclusively that it formed a new attachment to the peritoneum at some point. This fact convinced me that it was possible to transfer an ovary from one patient to another, and I subsequently made public statement of this fact.

Mrs. —, aged 42. Multipara. Cancer of the cervix. Present, Drs. Stone, Hunter and Babb.

OPERATION, NOVEMBER 12, 1896. Uterus and appendages removed by the vagina. All blood vessels and ligaments ligated with catgut, and vault of the vagina closed with the same. Vagina lightly filled with iodoform gauze. Returned home on the fourteenth day after operation.

Note. January 5, 1901. The patient has never had any return of the disease.

OVARIOTOMY.

Mrs. —, aged 42. Multipara. Has for some time been the subject of a large multilocular ovarian cyst. For ten days or a fortnight she has had some temperature, accompanied with nausea and vomiting. Four days ago I saw her in consultation with Dr. Eastman, and diagnosed twisted pedicle. Present, Drs. Stone, Hunter, Eastman and Batten.

OPERATION, NOVEMBER 24, 1896. Median incision, hand introduced, slight adhesions between the omentum and cyst were broken up. The cyst was found agglutinated to the abdominal wall in all directions, but was readily separated by the hand. The cyst was collapsed by means of the trocar and withdrawn. Its pedicle was ligated and divided with the ther-

mo-cautery. The wound was closed with catgut continuous and silk worm gut suture. Time, twenty minutes. The pedicle was long and twisted two and one-half times.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Miss —, aged 30. Health wrecked. Pain in back and inguinal region. Uterus retroverted, ovaries prolapsed. Rectal pain and spasmodic contraction. Anæmia and neurasthenia. Hysterical spasms of the muscles of deglutition. Present, Drs. Stone, Hunter and Ayers.

OPERATION, DECEMBER 12, 1896. Curettage of the endometrium. Division of the sphincter ani muscle with the knife through the fissure. Short median abdominal incision, with anterior fixation of the fundus uteri, at and below the lower angle of the wound, with catgut suture.

Result. Recovered, with rapid re-establishment of general health following.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 52. Multipara. Chronic endometritis, salpingitis and ovaritis, and recurrent pelvic peritonitis. Present, Drs. Stone, Hunter, Babb and Wilson.

OPERATION, DECEMBER 14, 1896. Circular incision of the vaginal tissues around the cervix with the Pacquelin cautery, blunt dissection with the finger, exposing the lower planes of the broad ligament. Application of clamp forceps close to and on either side of the cervix, embracing the lower segment of the exposed ligaments, including the uterine arteries. Division of the ligaments between the forceps and the uterus, on either side of the cervix. Complete bi-section of the anterior wall of the uterus with the scissors as it was drawn down by strong

cervix forceps, meantime opening the cul-de-sac and the uterovesical space. Operation completed by the further application of clamp forceps and division of the ligaments. Introduction of strips of iodoform gauze into the pelvis and vagina. Introduction of catheter into the bladder, and securing handles of the forceps together with a strip of absorbent cotton and ligature. Time, thirty minutes.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 33. V para. Bi-lateral laceration of the cervix and introitus vagina. Uterus prolapsed and retroverted. Chronic adherent salpingitis and ovaritis. Present, Drs. Stone, Hunter, Babb and Taylor.

OPERATION, MARCH 12, 1897. Thermo-cautery, clamps and scissors. Anterior wall of the uterus split up in process of delivery. Time, twenty-seven minutes.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 50. IV para. Uterus prolapsed and retroverted. Vesicocoele. Rectocoele. Laceration of the introitus vagina and cervix uteri. Menorrhagia. Fibroid in fundus of uterus. Present, Drs. Stone, Hunter and Babb.

OPERATIONS, MARCH 18, 1897. First—Curettage of the endometrium. Second—Trachelorrhaphy. Third—Anterior and posterior colporrhaphy. Fourth—Median abdominal incision. Fifth—Myomectomy-interstitial fibroid in the fundus uteri. Sixth—Anterior fixation of the fundus uteri. All wounds during the operation closed with catgut, known as "Edebohl's forty-two day catgut." Time, one hour and fifteen minutes.

Result. Recovered. Future complete restoration to health.

APPENDECTOMY.

Mrs. —, aged 24. For two years has had an uneasiness in the right iliac region, described as a grumbling pain. On several occasions she has been confined to bed, with an aggravation of the pain, accompanied by nausea and vomiting. Diagnosis, chronic appendicitis. Present, Drs. Stone, Hunter, Babb, Hopkins and Kniffler.

OPERATION, MARCH 24, 1897. Inch and a quarter incision over root of the appendix-appendectomy. No adhesions. Appendix five inches in length, hardened by interstitial chronic inflammation, mucosa disintegrated.

Result. Recovered.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 34. Nullipara. Two months after marriage began suffering from dysmenorrhea, leucorrhea, vessical irritability. Present condition, suffers almost constant pain in the pelvic region, uterus and appendages seem to be glued up en masse, and very slightly movable. Present, Drs. Stone, Hunter and Babb.

OPERATION, MARCH 29, 1897. Curettage of the endometrium. Opening Douglas' cul-de-sac, and finger inserted for further information. Patient placed in Trendelenberg posture. Median abdominal incision, adherent appendages removed from both sides of the uterus. Fundus uteri fixed at and below the lower angle of the wound and the latter closed, with step catgut suture. Time, forty minutes.

Result. Recovered.

Note. One month previous to this time I divulsed her sphincter ani muscle and removed several hemorrhoids, also at the same sitting removed a painful caruncle of the urethra.

APPENDECTOMY AND ANTERIOR FIXATION OF THE UTERUS.

Miss —, aged 22. Retroversion of the uterus, with chronic appendicitis. Present, assistants.

OPERATION, APRIL 8, 1897. Short median incision, followed by appendectomy and anterior fixation of the fundus uteri.

Result. Recovered.

Following this case, on the margin of the note book, which is numbered, "400th laparotomy," I find the following memorandum. Note on results. Last 100 abdominal sections, 9 deaths, 91 recoveries. Last 100 abdominal sections and vaginal hysterectomies, for non-malignant disease, combined, 10 deaths and 90 recoveries. Last 100 intra-peritoneal operations by abdominal section and vaginal hysterectomy, for both malignant and non-malignant disease, all taken together, and no case having been refused, 12 deaths and 88 recoveries.

Remarks. The mortality in this last 100 cases over the preceding 100, has somewhat increased, owing to the large number of very neglected and extreme cases, in some of whom there were malignant disease. I think however, that the extreme mortality of nine per cent in the abdominal sections, is less than the mortality of either Sir Spencer Wells, or Prof. Von Bilioth, in unselected cases, although no two series of 100 cases each are alike, the statistics being taken from their own publications. The statistics of Martin of Berlin, in unselected cases, for all intra-peritoneal operations, is about the same as here recorded in my own work.

Frequently I have resolved to shunt apparently hopeless cases, and just as often my sympathy for the patient has gotten the better of my judgment.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 28. V para. Confined two months ago, abdomen remained large after confinement. Has diarrhea

and constant abdominal pain. Patient weighs but ninety pounds, and her pulse is running from 120 to 132, and her temperature from 102 to 105. The abdomen is fluctuating. She has the symptoms of an ovarian cyst with a twisted pedicle, subsequent peritonitis and sepsis. The case looks like a mighty hard proposition. Present, Drs. Stone, Hunter, Babb, Holman and Hamilton.

OPERATION, APRIL 11, 1897. Free median incision, followed by the immediate evacuation of several quarts of bloody fluid. A large hard rubber tube connected with the irrigator, was introduced into the adherent cyst cavity which was thoroughly washed out, and its interior was dried with gauze mops. The peritoneum of the anterior abdominal wall, thick, chocolate color, and covered with a soft macerating substance, probably formerly the anterior wall of the cyst, was readily made out. The entire entrance to the pelvis was closed, and the same macerated condition was apparent over the proximal side of the septum, shutting off the pelvis. Turning my attention to the upper end of the cyst cavity, I found the abdominal cavity shut off above, not a vestige of the omentum or small intestines could be discovered. About one third of the circumference of the transverse colon protruded into the cyst cavity with the walls of which, it was closely adherent and continuous. A few inches of the ascending colon and descending colon, bore the same relation to the cyst cavity. There was but one explanation to this phenomenal condition. It was this: a large ovarian tumor had rotated upon its pedicle, shutting off its circulation. The cyst had become universally adherent, and a digestion of the cyst by the peritoneum, was in progress. It was the most remarkable effort of nature to save a life, I have ever witnessed. The cavity of the cyst was loosely filled as follows: Eighteen inches square of plain sterilized gauze was spread out in the interior of the cyst, and eighteen inches square of iodoform gauze was inserted within the folds of the plain gauze. A corn-

er of each piece was brought out at the lower angle of the wound, which was then partly closed from above downwards. During the week following this operation her temperature rose as high as 106, and her pulse ranged from 140 to 150. The first dressing was withdrawn on the third day, and the patient resting in a large Kelly pad, the cavity was thoroughly flushed out with a warm, borated solution. A drainage tube was inserted into the cavity, and secured in the lower angle of the wound, which was now closed down to the tube. Daily irrigation of the sac was kept up, for twenty-one days, when she returned home. The treatment was then continued by Dr. Holman, until the fifth of September following, five months after her operation, when the tube was removed, and the wound was allowed to heal.

Note. I saw this patient on May 28, 1898, thirteen months after her operation, she was in excellent health, weighing one hundred and forty pounds, or fifty pounds more than at the time of the operation.

EXPLORATORY INCISION.

Mr. —, aged 60. Present, Drs. Hunter and Ewing. April 27, 1897. Consultation with Dr. Ewing. Abdomen distended with ascitic fluid. Diagnosis, suspected cancer of the peritoneum. In order to verify the diagnosis, or to disprove it, an incision one inch in length was made between the ensiform cartilage and umbilicus. The cavity was found to be filled with bloody serum and a nodule of cancer could be felt in the right lobe of the liver. Wound closed.

RUPTURED ECTOPIC GESTATION.

Mrs. —, aged 25. Became pregnant about two months ago. Fourteen days ago symptoms of a ruptured tubal pregnancy

began. From that date until to-day, there is a history of procrastination. When Drs. Shillito and McGee appear on the scene, they diagnose a ruptured tubal gestation, and with commendable celerity arrange for an immediate operation. I reached the house about midnight, the patient was lying in bed pulseless, distended and blanched. Present, Drs. Shillito and McGee.

OPERATION, MAY 8, 1897. Dr. Shillito, administered some Squibb's ether, and we lifted her from her bed to a kitchen table, and under the gas light in the kitchen, Drs. Shillito and McGee assisting, I quickly opened the abdomen by a median incision, and with a ligature secured the appendage with its bleeding vessel. More than a gallon of liquid blood, serum and clots was turned out of the peritoneal cavity, which was flushed out with hot water. The foetus was found in the blood clots, and the placenta was sticking in the fimbriated end of the tube. The wound was closed and the patient put to bed. Everything possible was done to try to resuscitate her.

Result. Died thirty hours later of exhaustion.

Patient had been operated upon too late.

SUPRA-VAGINAL HYSTERECTOMY.

— — —, aged 35. Disabled, unable to follow her occupation, on account of a large fibro-myoma, which has developed between the folds of the right broad ligament, causing continual discomfort, and considerable pain. The patient is plethoric. Present, Drs. Stone, Turnbull and Lee.

OPERATION, MAY 24, 1897. Trendelenberg posture. Free median incision Tumor and uterus firmly anchored in the pelvis. Working space limited. Close to the left border of the uterus well down, a strong silk ligature was carried through the left broad ligament, and firmly tied, across the infundibulo pelvic ligament, securing both the uterine and ovarian arteries. A

pair of lock handled forceps was placed between the ligature and the horn of the uterus, and the ligament was divided between the two, leaving the ovary and tube, and a portion of the broad ligament with the forceps, attached to the left horn of the uterus. The right broad ligament was now divided from the uterus out toward the right infundibular ligament; through the opening in the ligament the fibro-myoma was enucleated, and with the uterus was drawn into the abdominal wound. Above the vaginal junction, the uterus was amputated by anterior and posterior flaps. Two or three ligatures were applied, the incision in the peritoneum was closed with catgut suture, extending across and covering the cervix with peritoneum. The operation was accompanied by the loss of very little blood, and there was no shock. The operation had been unusually difficult on account of the complete impaction of the pelvis. When the patient was put to bed her pulse was 66.

Result. She rallied quickly, and progressed very favorably until in the third night following the operation, she began vomiting. The following morning the vomiting indicated an obstruction. Under an anæsthetic the wound was opened, and a loop of small intestine was found adherent to the pedicle, or stump of the left broad ligament, and was released. The pelvis was irrigated with a weak solution of boracic acid in sterilized water.

For the next five days she progressed satisfactorily. At midnight of June 1st, vomiting again set in, and on the morning of the second of June, it was evident that there was a second obstruction. She was again etherized, and the wound re-opened. An extensive, plastic peritonitis was found to be present. The intestines were glued together by a sticky lymph, which was present everywhere. They were carefully separated by the hand, and the abdominal cavity was filled with normal salt solution, some of which was left in the cavity, and the wound was closed.

High nutritive enemata were continued, one being administered before she left the operating room. The patient slept uninterruptedly for seven hours, and no further vomiting occurred in her case.

She died on the morning of June 3rd, ten days after the first operation, from exhaustion.

CHOLEDOCOTOMY.

Mrs. —aged 60. Has suffered for four years with severe and frequent attacks of pain, vomiting and jaundice. The present attack began twenty eight days ago, and for two weeks, Dr. Stybr has been begging for an operation. She has icterus gravis, with cholæmic symptoms. Her temperature is ranging about normal, and her pulse is about 100. She is in a half conscious condition, intelligence greatly impaired. She is gradually being poisoned to death with biliary salts. Her skin is a perfect bronze, and she is very fat. Present, Drs. Stybr, Stone, Hunter and Edward Sutton.

OPERATION, JUNE 8, 1897. A free incision, beginning at the tip of the tenth costal cartilage, and extending three and one-half inches slightly oblique, to the edge of the rectus muscle, was made. Passing the finger through the foramen of Winslow, two stones were encountered, both above the average size of gall stones, in that portion of the common duct, above the opening to the foramen. I endeavored to work the stones down into the ampulla of Vater and failed. An incision was made in the duct over the first stone encountered, and it was extracted. The second stone was extracted through the same opening. An ineffectual effort was made to suture the duct. The opening was high and the patient very fat. The work was being done in a private house, the morning was dark and it was raining. From the wound in the duct, a glass drain

tube, surrounded with iodoform gauze, was laid obliquely, protruding above the lower angle of the wound, where it was secured when the wound was partially closed. The bile was discharging through the tube in considerable quantity, and the patient rallied from the semi-conscious condition in which she had been prior to the operation, and until the beginning of the sixth day, there was improvement. But, during the sixth and seventh days, she relapsed into a condition of profound cholæmia, and died, without rise of temperature or any evidence of peritonitis.

OVARIOTOMY, WITH MYOMECTOMY.

Miss —, aged 41. Has suffered all her menstrual life with dysmenorrhea, and more or less distress between the periods. Has a small tumor on each side of the uterus. Present, Drs. Stone and Knox.

OPERATION, SEPTEMBER 5, 1897. Trendelenburg posture. Median incision. Two ovarian, dermoid cysts were removed, one from each side of the uterus. The pedicle of the right tumor was twisted. A small fibroid tumor occupying the fundus of the uterus was removed by splitting its capsule and shelling it out, followed by suture of the wound with catgut. The abdominal wound was closed with catgut running step, and interrupted silk worm gut, through and through sutures.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 28. I para, five years ago. Has bi-lateral laceration of the cervix uteri and laceration of the introitus vagina. These injuries were followed later by chronic endometritis, salpingitis, and ovaritis, with recurrent pelvic peritonitis. Is confined to bed one week out of each

month, and describes her suffering as "intolerable." Present, Drs. Stone, Hunter, Babb and Anderson.

OPERATION, SEPTEMBER 10, 1897. Circular incision of the tissues overlying the cervix with the thermo-cautery. Lateral division of the same with the scissors as high as the vaginal attachment, blunt dissection with the finger, exposing the lower planes of the broad ligament, opening the cul-de-sac, and utero-vesical space. Clamp forceps to the lower segments of the broad ligaments, securing the uterine arteries and separation of uterus and ligaments with the scissors. Anterior wall of the uterus bi-sected with the scissors as the fundus enters the vagina. Pair of clamp forceps is now passed across the remaining portion of the broad ligament including the ovarian artery on each side, and the ligaments are separated with the scissors. The uterus and appendages are removed en masse and four pairs of clamp forceps occupy the vagina, which is lightly filled with iodoform gauze, extending to the top of the forceps.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 62. II para. Began having uterine hemorrhages four years ago, twelve years after her menopause. Was curetted one year ago without benefit. Examination at this time is followed by a diagnosis of malignant disease of the endometrium. Present, Drs. Stone, Hunter and Babb.

OPERATION, SEPTEMBER 13, 1897. Uterus and appendages removed as in the preceding case.

Result. Recovered.

COMBINED OPERATIONS.

Mrs. —, aged 24. II para. Sustained at last labor a bilateral laceration of the cervix and a laceration of the introitus vagina. She has also suffered severely from

repeated attacks of biliary colic. Present, Drs. Stone, Hunter, Babb and Kimmel.

OPERATION, SEPTEMBER 15, 1897. First: Curettage of the endometrium. Second: Trachelorrhaphy. Third: Perineorrhaphy. Fourth: Cholecystotomy, oblique incision, parallel with the right costal border, exposing the gall bladder, sausage-shaped, containing no fluid, but containing three large gall stones, set in a row, and closely invested by the walls of the gall bladder. The latter was drawn into the wound, incised and emptied, and the wound stitched into the abdominal wound, and a rubber drain tube introduced into the gall bladder. Time occupied fifty-two minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. —, aged 33. Multipara. Until a few days ago the patient supposed herself to be pregnant. Passing over her expected time, I saw her in consultation with the Drs. Lindley. We agreed that she had a large, multilocular, ovarian tumor. She has had several attacks of colic, which were doubtless due to patchy peritonitis. Her temperature at this time is running above 100, and her pulse is 122. A diagnosis of twisted pedicle is also announced. Present, Drs. Stone, Hunter and Babb, H. S. Lindley and L. W. Lindley.

OPERATION, SEPTEMBER 21, 1897, the day following the consultation. Free median incision. Introduction of the hand, and the breaking up of extensive, recent adhesions. Reduction of a number of cysts with the trocar, and delivery of the collapsed mass through the abdominal wound. The pedicle was first secured with catgut ligature, above which Baker-Brown's clamp was applied. Above and close to the clamp the

pedicle was divided with the thermo-cautery, and the clamp removed. The right ovary was found cystic, large as a lemon, and was removed. The cavity was flushed out with normal salt solution, and the wound was closed by means of continuous catgut step suture.

Result. Recovered.

Note. The pedicle was found twisted as suspected. The cysts and contents weighed twenty-five pounds.

• SUPRA-VAGINAL HYSTERECTOMY.

— —, aged 32. Has been suffering for eight years with a bleeding fibro-myoma. She has grown very thin, anæmic and neurasthenic. Her heart sounds are very feeble, and its walls are probably "fatty." At the moment of this consultation, we find her just recovered from a severe hemorrhage. No treatment has, thus far, been of any avail beyond temporary relief. Apostoli's method has been tried for three years. Perilous as an operation must be in such a case, there seemed to be no other way out of the difficulty. I agreed to make the operation. The patient was moved into the Hospital, and for the following ten days was confined to bed. During the entire time heart stimulants, consisting of strychnia, nitro-glycerine and alcohol, in conjunction with full feeding of nutritious food, to which beef juice was freely added, were given. A dessert spoonful of castor oil and glycerine in combination, was administered at bed time and early in the morning. At the end of ten days her chronic constipation had been overcome, her heart sounds and pulse were better. And I would gladly have continued her treatment for a longer period before operating, but it was not possible, because inside of the next forty-eight hours another hemorrhage was due. In other words, the patient was now at her best. The tu-

mor reached far above the umbilicus. Present, Drs. Stone, Hunter and Babb.

OPERATION, ———, 1897. A twelve or fourteen inch incision, median, gave easy access to the tumor. After separation of some omental adhesions: a strong silk ligature was passed through the broad ligament as low down as possible, close to the uterus, and tied, including the breadth of the broad ligament, the infundibulo pelvic ligament, with the ovarian artery. A pair of Dudley's long lock handled forceps was now placed across the ligament under the tube and ovary, and the ligament was divided with the scissors, parallel with and below the forceps. The same procedure was repeated upon the opposite side. The mass was now more movable and manageable. At a point about three-quarters of an inch above the attachment of the bladder, an incision dividing the peritoneum and cellular tissue was carried across the front of the uterus, and a similar incision was made across the back of the uterus. The peritoneum severed front and rear, was pushed down by blunt dissection, forming two flaps. The uterus was amputated by wedge shaped incision between the flaps. But one artery required ligation. The mass was now removed. The opening in the cervix was closed by interrupted silk sutures, and the incision in the peritoneum, which had been extended, opening up one broad ligament, was closed by continuous catgut suture. Very little blood was lost in the operation, which was completed in forty-five minutes. The uterus and tumor weighed nine and one-half pounds. The abdominal wound, after complete cleansing of the peritoneal cavity, was closed with continuous cat-gut step suture.

Result. Patient rallied well from the operation. Vomited but little. The bowels were moved and she was passing gas freely at the end of the second day, but the heart was weak, requiring stimulants in frequently repeated doses. Hypodermic injections of strychnia and nitro-glycerine were given, also beef

juice, liquid peptonoids, and some alcoholic liquor, by the mouth. A nervous irritability, accompanied by insomnia, a form of surgical shock, manifested itself with the passing off of the ether, and continued throughout the case. The patient survived the operation for four days, dying of a sudden collapse, due distinctly to heart failure. The average temperature throughout the case was 99 degrees. The pulse was running at 120, thirty hours after the operation, its frequency gradually increasing. In the fourth night at eleven o'clock, the pulse rate was 136. At two, A. M., pulse 150, patient bathed in a cold sweat. At the end of four days her heart stopped.

Note. The secondary condition of the heart in all cases of large fibro-myoma, constitutes at once the greatest danger to be incurred in the operation of supra-vaginal hysterectomy, and the strongest argument for surgical interference with these tumors, when small. A heart which has become "fatty," affected with that condition known as "brown atrophy," usually accompanied with dilatation, is very liable to break down during convalescence from such an operation. If the patient escapes during convalescence, she may return home and die suddenly, by reason of the condition of her heart, any time within six months.

CHOLECYSTOTOMY AND CHOLEDOCOTOMY.

Mrs. —, aged 34. Multipara. Repeated attacks of biliary colic during the last five years, attacks increasing in severity. Has considerable pain over the region of the gall bladder, which is overlapped by the enlarged right lobe of the liver. Present, Drs. Stone, Babb, Eastman, Hess and Moore.

OPERATION, NOVEMBER 4, 1897. A free vertical incision through the right rectus muscle. Enlarged right lobe of the liver turned toward the right side, rolling the gall bladder into the incision. The gall bladder was emptied of mucus by means

of the aspirator trocar, and an incision was made in its proximal end with the scissors. Twenty-eight gall stones were removed from the gall bladder itself. One large stone remained impacted in the common duct. The duct was incised for three-quarters of an inch with the knife, and the stone was extracted through the incision. The wound in the duct was closed with interrupted silk suture. The wound in the gall bladder was stitched into the upper angle of the abdominal wound, and a soft rubber drain tube was inserted into the gall bladder. The protecting gauze was removed and the abdominal wound closed. Time, one hour.

Result. Recovered.

APPENDECTOMY.

— —, aged 23. First attack of appendicitis at ten years of age. Second attack in July, 1897. Third attack in the evening of December 4, 1897, after a long walk. Four days later operation decided by Dr. McCready to be necessary. Present Drs. McCready and Stone.

OPERATION, DECEMBER 9, 1897. Pulse 80, no abdominal distention, no chill has occurred. A three inch incision, oblique, crossing the root of the appendix was made. In drawing up the caput coli an abscess imprisoned behind it was opened, and about two ounces of pus were discharged and mopped out. The appendix was found with a perforation in its wall. With the meso-appendix it was amputated at its junction with the cæcum, its stump depressed toward the calibre of the gut, and covered with peritoneum. The protecting gauze was withdrawn, and the environment of the cæcum was carefully mopped with moist sublimate gauze. A strip of iodoform gauze was fed in over the infected surface, its proximal end protruding at the lower angle of the wound. The unoccupied portion of which was now closed with running catgut suture. The gauze was re-

placed at the end of forty eight hours with a soft rubber drain tube, and the case progressed under the care of Drs. Robert McCready and son.

Result. Recovered.

— —, aged 22. Recurrent catarrhal appendicitis, attacks as follows: First—March 5 to 21, 1897. Second—March 28 to April 12, 1897. Between April 15 and July 1, 1897, had three attacks. Sixth—July 15 to 30, 1897. Seventh—September 5 to 12, 1897. Eighth—attack began four days ago, December 25, 1897. Present, Drs. Stone, Hunter, Babb and Hazzard.

OPERATION, DECEMBER 29, ——. Two and a quarter inch vertical incision over McBurney's point. Appendix found non-adherent, four inches in length, containing two perforations in its walls. The appendix suggests a skinned rat's tail by its appearance. The appendix and meso-appendix were amputated, the former under the peritoneum, and the ligated stump was depressed toward the lumen of the gut, and covered with peritoneum. The field of operation was wiped out, with antiseptic gauze, and the abdominal wound was closed by step catgut suture.

Result. Recovered.

COMBINED GYNECOLOGICAL AND ABDOMINAL OPERATIONS.

Mrs. —, aged 41. III para, youngest child eleven months old. Examination, bi-lateral laceration of the cervix uteri. Laceration of the perinaeum down to the sphincter ani muscle. Very decided tenderness over McBurney's point, and an impression of a movable something communicated to the fingers. Her right kidney is prolapsed. Her gall bladder can be felt and is quite tender, has had biliary colic. Present. Drs. Hunter, Babb, Stone and Hazlett.

OPERATIONS, JANUARY 4, 1898. First—Curettage of the endometrium, irrigation of uterine cavity and swabbing out the same with a saturated solution of iodized phenol. Second—Trachelorrhaphy. The cervical flaps were denuded and the clefts of the lacerations were cleaned out with Schröder's catling knife. The denuded surfaces were united with catgut suture. Third—Perinæorrhaphy. A curvelinear triangular surface, the apex resting a half inch above the vaginal crest, the sides extending obliquely to the caruncula myrtiliformes, the latter points united by a curvelinear incision through the junction of the skin and vaginal muccsa, was denuded with Schröder's knife. The edges of this triangle, from its apex to the caruncles, were united by interrupted silk sutures, eight to the inch. With a long curved needle, a deep binding suture of silk was passed as follows. The point of the needle was entered three eighths of an inch from the edge of the external incision, and carried upwards through all the tissues, on the right side of the wound. With a turn of the wrist, it was sent through the corresponding tissues of the opposite side, and made to emerge through the skin three-eighths of an inch from the opposite edge of the wound, the point of entrance and exit being directly opposite one another. This binding suture was for the moment left untied, the needle having been removed. A few interrupted sutures now closed the external wound, and the deep binding suture was tied. The vagina was now thoroughly irrigated with hot water, and mopped dry with small cotton balls, and loosely filled with iodoform gauze. The sphincter ani muscle was divulsed, and the pelvic operations were completed.

The patient was now placed in the extended dorsal decubitus, and to determine the enigma concerning the appendix, a short median incision was made above the pubic symphysis, and the fingers were introduced into the peritoneal cavity. The appendix was located, and decided to be normal. But, peeping over an imaginary line drawn transversely to McBurney's

point, steadied somewhat by the super-imposed hand on the abdominal wall, could be felt a thin projection of the right lobe of the liver, near the lower end of which was suspiciously the gall bladder, containing calculi. The abdominal wound was now closed with catgut suture.

In this intra-abdominal exploration the right lobe of the liver, unusually long and movable, was noted, and it was concluded that it had been mistaken for a movable kidney. Fifth—A free incision was carried vertically through the right rectus muscle, at its upper extremity, and the gall bladder was drawn into the incision. It was sausage shaped, not unusually thick, but unusually long, and the overlapping, thin, projecting edge of the right lobe of the liver, hanging down like an apron over it, was very unusual. The gall bladder contained no liquid of any moment. It was split open at the end, having been surrounded with protective gauze, and five large gall stones, deposited in a row, one on top of the other, and occupying a space four inches in length, were extracted. The incised end of the gall bladder was stitched into the deeper structures of the abdominal wound, a soft rubber drain tube was introduced into the cavity, the protecting gauze was removed, and the wound was closed with catgut step suture. Time occupied, one hour and thirty-five minutes.

Resul. Uneventful recovery, with excellent results all around.

Note. In the original examination, the statement is made that the gall bladder could be felt, and that it was quite tender. What was really felt was the thin projecting edge of the liver, which overlaid the gall bladder, and that indescribable "something" which was felt at McBurney's point, proved subsequently to be the projecting end of the gall bladder, and edge of the lobe of the liver. The diagnosis of movable kidney was an error, but a harmless one. This patient paid me a social call in my office one year after these operations, and was in most excellent health.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 37. Multipara. Examination, uterus retroverted: bi-lateral laceration of the cervix, and introitus vagina; painful anal fissure. Present, Drs. Stone, Hunter and Ahlers.

OPERATION, MARCH 20, 1897. First: Curettage, irrigation and swabbing out of the uterine cavity with saturated solution of iodized phenol. Second: Perinæorrhaphy. Third: Division of the sphincter ani muscle through the fissure. Fourth: Short median, abdominal incision, with anterior fixation of the fundus uteri, at and below the lower angle of the wound, with a single buried silk worm gut suture. Closure of the abdominal wound with cat gut. Time, forty-five minutes.

Result. Recovered.

Note. In dealing with complete lacerations of the perinæum, I have found the operation of Lawson Tait easy of accomplishment, and very satisfactory in its results. The various forms of laceration of the introitus vagina, with their variable extent of involvement of the pelvic floor, require a great diversity of operative procedure. I follow but one rule, and that is to repair the injury, thus avoiding a common error of applying any fixed method of operation. In my earlier work, twenty-five years ago, I was simply a copyist of the methods practiced in the Woman's Hospital of New York. The operations were done by denuding with the scissors, and the denuded surfaces were approximated with silver wire suture. The method was a great improvement upon all the methods running back far beyond the improved method of Baker-Brown, and represented the full fruition of the labors of Sims and Emmett, up to that period. But after having spent almost two years in the Gynecological clinics of Europe, during the years 1881, '82 and '83,

upon my return to work I adopted the methods of Hegar, Martin and Schröder, in plastic work in and about the vagina, and have adhered to these methods, with the very occasional use of that of Mr. Tait. for complete laceration of the perineum, ever since. A knife is a surgical instrument, and in my judgment, scissors are only useful to those who have not acquired dexterity with a knife. The surgeon approaching the amputation of an extremity, shapes the method to be pursued in the operation by the exigencies of the case; and in plastic work, about the introitus, the gynecological surgeon should learn to do the same thing.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 37. Aborted first pregnancy six years ago. Has a chronic septic endometritis, salpingitis and ovaritis. Six years ago one ovary was removed on account of persistent pain. But little benefit was experienced from the operation. Has menorrhagia and severe dysmenorrhea. Present, Drs. Stone, Hunter, Ahlers and Cunningham.

OPERATION, MARCH 24, 1898. A circular incision with the Pacquelin cautery point was made through the super-imposed cervical tissues, close to the proximal end of the cervix. From this incision to the vaginal attachment on either side of the cervix, an incision was made with the scissors. Blunt dissection with the finger exposed the lower planes of the broad ligament, and continued upwards over the front of the uterus, exposed the utero-vesical peritoneum, which was opened, the opening being well dilated by the introduction and spreading of two fingers. Resuming the blunt dissection, the cul-de-sac was now opened. Two pairs of long handled clamp forceps were now applied, one on each side of the supra-vaginal cervix, and close to the uterus, securing the lower segments of the broad ligaments, including the uterine arteries. With the

scissors both ligaments were divided between the forceps and the uterus. As the uterus was drawn down, two additional pairs of forceps were placed on the now accessible superior segments of the broad ligaments, and the latter divided with the scissors. The uterus now well exposed, its anterior wall was split open in the median line, with the scissors, in its entire exposed length. Two pairs of strong cervix forceps were anchored one on either side of the incision, and as traction was exerted upon these, the fundus advanced, and the incision with the scissors was carried higher until the split uterus emerged into the vagina. The uterus was now held only by the very superior segments of the broad ligaments, to which the tubes and ovary were attached. A pair of clamp forceps on either side was placed across the remaining portion of the broad ligament, including the infundibulo pelvic ligament and the ovarian artery. The ligamentary tissue was divided to the inner side of the forceps, with the scissors, and the specimen consisting of the split uterus, the right ovary and tube, with a portion of the broad ligament, and the left tube, with a portion of the left ligament, was delivered en masse. A strip of iodoform gauze, soaked in sterilized glycerine, was carried to the tops of the forceps, and dry iodoform gauze was introduced into the vagina. A catheter was introduced into the bladder. Some cotton balls were introduced in around the handles of the forceps, to protect the soft tissues. The handles of the forceps were secured with a strip of absorbent cotton wound around them, surrounded by a silk ligature.

After Treatment. Patient was placed in bed, with her limbs flexed slightly, and each one secured at the knee to a pillow, by a bandage encircling both the pillow and the knee, and the side rail of the bed. The proximal end of the catheter was introduced into a glass urinal. Pain was controlled by rectal suppositories containing opium, and all food withheld for twenty-four hours, after which beef juice and tea or coffee were

allowed, until the end of the second day. Forty-five hours after operation, the patient was lifted out on a short, narrow table, her feet resting in supports screwed to the corner of the table, her knees widely separated and in a good light, the following technique was followed: The ligature and cotton surrounding the handles of the forceps were removed. The catheter was withdrawn. The hips and surfaces surrounding the vagina were washed off with a five per cent. solution of carbolic acid, and the surface irrigated with hot water, which flowed over the Kelly pad into a small tin foot-bath tub. The cotton balls surrounding the mouth of the vagina were picked out, and the surfaces occupied by them were mopped with a five per cent. solution of carbolic acid. The iodoform gauze in the vagina was now withdrawn, and an Ouvard speculum was introduced under the forceps, which were now removed, *ad seriatum*. The entire vagina was now carefully mopped out with cotton balls saturated with a five per cent. solution of carbolic acid. The end of the strip of gauze in the pelvis was caught with the forceps, and about two-thirds of it was drawn into the vagina, and the proximal end of it cut away with the scissors, just within the labia. Two strips of fresh iodoform gauze were now passed into the vagina, one behind the protruding end of the pelvic gauze, and one strip in front of it. The speculum was withdrawn and the patient replaced in bed. Light diet was allowed until the end of the fourth day, when the patient was replaced on the table in the lithotomy position, before the window. The speculum was re-introduced after the external surface of the hips had been washed off with a five per cent. solution of carbolic acid and hot water, and all the gauze in the vagina, and that remaining protruding from the pelvic cavity, was withdrawn. The vagina was mopped out with a five per cent. solution of carbolic, and lightly filled with iodoform gauze. The speculum was withdrawn and the patient put to bed, and a laxative administered. On the sixth day, the gauze

in the vagina was withdrawn by the nurse, and the vagina was douched out with fifty per cent. Theirsch's solution, reduced from full strength with hot water. The bowels having moved, the patient was put upon full diet, and confined to bed until the close of the eighth day, when she was allowed to leave her bed at will.

Note. Unless these cases are feeble, they are allowed to return home at any time after the fourteenth day. After the eighth day, the vaginal douche consists of one in six thousand sublimate solution, which is kept up either by the nurse, or in case the patient returns home earlier, by her attendant, until the twenty-first day. After which all treatment may be suspended. Of course it goes without saying, that a varied medication in these cases frequently becomes necessary, and is alike patent to both the specialist and the general practitioner. The preparatory treatment to these cases as well as that for all abdominal and pelvic operations, has with me resolved itself into the following.

First—It is expected that the patient will begin preparatory treatment at least forty-eight hours before operation, and I prefer and advise that the preparatory treatment in all intra-peritoneal operations, should begin four days prior to the time of operation.

Second—That a thorough examination of the urine be made, that a bath be administered, and a thorough purgation should follow. This is usually effected by the administration of ten grains of calomel and soda, given at the beginning, after the preliminary bath, and followed in eight hours, with a full dose of castor oil, containing a couple of drachms of glycerine. Occasionally where the habit of constipation has been in force, the action of the oil is followed by a high enema of a copious quantity of soap suds, containing an ounce of turpentine to the quart. This performance has occupied the first day. The patient is now put upon a liberal concentrated diet, and two

grains of quinine, with one fortieth of strychnia, is given three times a day, up to four hours prior to operation on the fourth day. On the night preceding the operation, the patient having been kept in bed from the beginning of the preparatory treatment, a second thorough bath is given, and the vagina is douched out with a copious amount of a 1-6000 sublimate solution. The surface of the abdomen is especially well scrubbed with a brush and green soap. Full feeding is still in progress. At five o'clock of the morning of the operation, the night nurse administers to the patient a full dose of castor oil containing some glycerine, at seven o'clock a cup of strong coffee, containing one fortieth of a grain of strychnia is administered. At eight o'clock, a dessert spoonful of beef juice is given in an ounce of ice water, and the operation begins at eleven o'clock, the bowels having been thoroughly evacuated, and the patient's heart having been well braced up.

If the operation is vaginal, the vagina is well scrubbed out with an antiseptic liquid soap, followed by alcohol, and if the vagina is not narrow, 1-6000 sublimate solution. If the operation is to involve the abdomen, the antiseptic abdominal compress which was placed in position an hour or more before the operation, and after the bowels had moved, is taken off and the surface of the abdomen is douched with alcohol or ether. I do not permit the nurse to shave my patients, and thereby almost frighten them to death, but whatever shaving is necessary is done on the operating table, the patient under the influence of an anæsthetic. In the selection of the latter, I prefer chloroform, but frequently resort to ether or a combination of both with alcohol. I have never been favorably disposed to large audiences and as a rule, the audience has been limited to my assistants, nurse, and the patient's physician. No unnecessary conversation is permitted in the operating room, and the operation is accomplished with the least possible loss of time, compatible with accurate work. Where the operation has involved the ab-

dominal viscera, through an abdominal wound, the after treatment presents a varied picture. Where there has been but slight disturbance and no traumatism, of the intestinal peritoneum, there is likely to be very little occasion for activity in the after treatment. Some patients are tormented, and torment the attendants, with persistent vomiting during few or more hours after operation, and complain of insufferable thirst. To quench the latter is to increase the former, and I insist that no liquid shall be swallowed, but that the mouth be washed out very frequently with hot or cold water. Usually the vomiting subsides within a reasonable period, but occasionally it is persistent beyond the reasonable period, and something must be done. In such cases I usually administer from two to four grains of calomel, with an equivalent quantity of soda at one dose, and two or three hours later, allow the thirsty patient to drink small but frequently repeated doses of solution of citrate of magnesia, to each dose of which, some times, is added a small quantity of sulphate of magnesia. This contest usually occurs at the close of the first or in the early hours of the second day, and usually terminates by the thirteenth or thirty-sixth hour, when the patient is passing gas, and the stomach has become quieted. If however, during the operation, there has been great disturbance of the abdominal viscera, and unavoidable traumatism of the intestinal peritoneum, a somewhat different course is advisable. Peristalsis of the intestinal tract should be provoked at as early a moment as is compatible with the general condition surrounding the case, and is best accomplished by high enemas, consisting of epsom salts and glycerine. A saturated solution of from two to four ounces of the former, with from one to three ounces of the latter, may be given through a long rectal tube, introduced its full length. The enema may be repeated if necessary after the lapse of a couple of hours, and will be found an efficient remedy. As soon as peristalsis is established, it will be advantageous to occasionally change the position of the patient

from the dorsal to either lateral decubitus. In cases of the first class, in which vomiting is not an annoying symptom, the patient may be trusted to time, and the nurse instructed to occasionally observe the epigastric region and to report any distension present. The habit in vogue among nurses of taking the temperatures of patients every little while after an operation, is not only useless, but absolutely detrimental to the patient, and annoying whether the temperature is taken in the mouth or axilla. The nurse should watch the pulse, and keep an accurate record of its frequency, at intervals of an hour; during the first ten or twelve hours after the operation in bad cases, and less frequently in the others. A sudden rise of pulse, running quickly above 120, should be reported at once. If however the patient has been put to bed with a very rapid and feeble pulse, and she finds it during her observations, decreasing in frequency and gaining in volume, she need not make any report to her superior, no difference what the pulse rate may be. If however there has been a sudden and great increase in the frequency of a pulse, and a failure in its tone, she should take the patient's temperature. If the latter is sub-normal or even normal, she should be taught to know that a hemorrhage is probably in progress, and she should call for assistance. The diet of surgical cases after operations, and after peristalsis has been restored, should consist of concentrated nutrition, such as beef juice, bovine, soluble beef, liquid peptonoids, carnogen, panopepton or buttermilk, until, and after the bowels have been moved. Peptonized milk was for a long time highly recommended in these cases. But a protracted experience with it, disappointed me, and I have discontinued its use. In all cases in which a large abdominal tumor has been removed at the operation, I continue to give strychnia or nitro glycerine in varying doses, and at varying intervals, until the patient is discharged. The condition of the heart in such cases should never be lost sight of. If given a chance it may break down, and it will do so occasion-

ally, in spite of all vigilance and precaution. The after treatment of these cases beyond that spoken of, is patent both to the specialists and the general practitioner.

ANTERIOR COLPOTOMY.

Miss —, aged 27. Chronic invalidism. Chronic endometritis, ovaritis and salpingitis, with recurrent pelvic peritonitis. Present, Drs. Stone, Babb and Ahlers.

OPERATION, MARCH 28, 1898. The anterior pelvic vaginal wall having been made tense and brought within easy reach, by dragging the cervix downwards and backwards, the forceps depressing the perinæum, and the vaginal eminence being drawn upwards, by an additional forceps in the hands of the assistant, a vertical incision was made, extending along the ridge of vaginal tissue, between the forceps, and sufficiently deep to expose the bladder. The flaps thus made were dissected back in their entire length, while the bladder was pushed out of the way by the finger. The space between the bladder and uterus having been well opened up, the utero-vesical peritoneum was divided, and two fingers were introduced into the utero-vesical space, and widely separated. The forceps were now removed and a traction ligature was passed through the anterior wall of the uterus. While traction was made upon this the cervix was pushed into the posterior fornix of the vagina, and the fundus uteri emerged into the vagina. The adherent ovaries and tubes were removed and the uterus pushed back in the pelvic cavity. The vaginal wound was closed with a running catgut suture, which picked up a superficial layer of tissue on the anterior wall of the uterus. The traction suture was removed, the vagina flushed out, and lightly packed with iodoform gauze. The patient was up in a week.

Result. Recovered.

Note. Let the reader note the simplicity of this procedure, free from all disturbance of the associate viscera of the abdom

inal cavity. Now let him thoughtfully compare this procedure with the following, which illustrates the recent operation advised by Faure of Paris, and Dr. Howard Kelly, of Baltimore:

OPERATION, Trendelburg posture. Free median abdominal incision, displacing from the field of operation the intestines of the lower abdomen, and introducing into the cavity gauze sponges or compresses. Breaking up of adhesions from above. Bi-section of the uterus, down and into the supra-vaginal cervix. Amputation of each lateral half of the uterus, with ligation of both uterine arteries. A division from below upwards with each adherent half of the uterus, the corresponding ovary and tube, the ovarian arteries having been ligated with the infundibulo pelvic ligaments, early in the operation. Now let him compare the future history of the case. The patient whose case I recite is not an exception to the rule, that such cases are out of bed the eighth day, but this hypothetical case, beside running all the risks of an extended laparotomy, without drainage, must remain in bed during the healing of an extensive abdominal wound, for a period ranging from sixteen to thirty days, and for months afterwards will require abdominal support. No man in the possession of the powers of right reasoning can arrive at any but one conclusion, namely: That a simple operation, almost devoid of mortality, is rejected for one which is dangerous, more complicated and much more uncertain in its results, with reference to the future welfare of the patient.

POSTERIOR COLPOTOMY FOR REMOVAL OF LARGE MULTILOCULAR OVARIAN CYST.

Mrs. —, aged 47. Multipara. Last labor eight years ago, after which she developed a multilocular ovarian cyst. Recently it has grown rapidly, three weeks ago she had an attack of circumscribed peritonitis. She is emaciated, anæmic, and her heart is weak, has menorrhagia also.

The abdomen contains some free fluid. The cyst reaches almost to the ensiform cartilage. The uterus is anterior to the cyst and inclined toward the left side. The pouch of Douglas is much distended, giving a wide space between a retracted posterior vaginal wall and the cervix. I decided to try ovariectomy by the vagina.

OPERATION, MARCH 29, 1898. Patient in the lithotomy position, end of the table elevated about four or five inches. Ouvard's speculum introduced. Douglas' cul-de-sac opened by a vertical incision, extending from the cervix to the recto-vaginal junction, down to the peritoneum, the latter picked up with the forceps, and snipped with the scissors. Ovarian fluid began pouring through the opening, which was now widely distended by the introduction of two fingers. Several pints of fluid escaped before the flow ceased. An unruptured cyst presented at the vaginal opening, and into it a trocar was introduced, and the compartment emptied. The collapsed cyst was drawn into the vagina, and laid open with the scissors. From its open interior the cyst next above it was entered with the trocar and emptied. Through it the next presenting cyst was emptied and drawn into the vagina, followed by a fourth cyst, which was empty and presenting a rupture on its superior surface. The pedicle was now ligated and divided, and the pelvic cavity, the table having been lowered, was flushed out with normal salt solution. The patient having been aroused by the hot water in the peritoneal cavity, began vomiting; the vagina filled with small intestines, which bunched out between and beyond the vulva. The anesthetic was pushed a little, and the end of the table was elevated ten or twelve inches, and the intestines were easily restored to the peritoneal cavity. The wound in the vault of the vagina was closed with catgut suture, including the peritoneum. The vagina was lightly filled with iodoform gauze.

Result. She was able to sit up in ten days, but during the month which she spent in the hospital, she had three seizures of heart failure, and was only saved by prompt and heroic stimulation.

I cannot refrain from again calling the attention of the reader to the organic changes which occur in the walls of the heart in cases requiring operation for large and old abdominal tumors.

Future History. The patient returned one year later, still suffering from the menorrhagia, noted as present at the time of the first examination. I cleared out the endometrium with a sharp curette, and wiped out the uterus with a saturated solution of iodized phenol. Notwithstanding a continuance of the menorrhagia, her general health was better than at the time of the ovariectomy, a year before. Twelve or fourteen days after the curetting, she returned home, and about three months later, on the 21st of June, 1899, she returned. The menorrhagia was persisting and growing more serious, and believing the disease in the endometrium to be malignant, I decided to take out the uterus.

OPERATION, JUNE 21, 1899. Vaginal hysterectomy was accomplished. Four pairs of clamp forceps were used. The opening into the peritoneum was narrowed about the tops of the forceps by catgut suture uniting the edges of the peritoneum. After this operation she returned home on the fifteenth day.

Note. On January 11, 1901, I wrote to Dr. L. A. Lemon, asking something of the future history of the case. Four days later he replied, saying: "I see her every few days going to the market, which is seven miles away."

Note. On the margin of the note book is the following memorandum: Four hundred and ninety-second intra-peritoneal operation.

SUPPURATING APPENDICITIS.

— —, aged 30. Fourteen days ago was attacked with severe pain in the abdomen, accompanied with nausea and vomiting, and followed by high temperatures and chills. Seen to-day in consultation with Dr. Armstrong, at Leechburg, Pa. The patient is much prostrated, there is evidence of constitutional sepsis. An exudate occupies the right iliac region, which is slightly distended, and resonant on percussion. A diagnosis of suppurating appendicitis is reached. Present, Drs. Stone, Banks, Orr and Armstrong.

OPERATION, MARCH 30, 1898. A vertical three inch incision, passing through McBurney's point, was carried downward and directly into the sac, out of which poured pus, fecal matter and gas. The sac was washed out and packed with iodoform gauze, which was left protruding at the lower angle of the wound. The latter was closed from its gauze drain to its upper extremity by step suture. The appendix was not seen and not sought for. Nature had walled off the sac. After two or three days the gauze was withdrawn, and a soft rubber tube inserted in its place. Thirty days later, the tube having been removed previously, a small fecal fistula persisted, and in the course of two or three months, closed permanently.

COMBINED ABDOMINAL AND VAGINAL HYSTERECTOMY.

Mrs. —, aged 35. Married two years ago upon the advice of a female physician who was treating her for fibroid tumor of the uterus, by electricity, and by which she claimed to to have cured a number of cases. With her, Apostoli was a failure, as he only claimed to relieve these cases, and not to cure them. After marriage her bad health grew worse, and now after two years, she finds herself two months pregnant, with a large interstitial fibro-myoma in the fun-

dus of the uterus, and another one as large as an orange growing out of the posterior wall of the uterus. The location in the pelvis of the lower tumor, caused me to depart from plain supra-vaginal hysterectomy, or Porro's operation, of which three successful cases are reported in these notes. Present, Drs. Stone, Babb and Ahlers.

OPERATION, APRIL 28, 1898. Patient in lithotomy position. Ouvar'd's speculum over the perinaeum. Cervix dilated and the uterus emptied. The super-imposed cervical tissues were now divided circularly with the thermo-cautery, and further released by lateral incision extending from the circular incision to the vaginal junction. By blunt dissection the lower planes of the broad ligaments were reached, and a pair of lock handled clamp forceps were placed across the lower segments of the broad ligaments on each side of the neck of the uterus, and the ligaments were divided with the scissors between the forceps and the supra-vaginal cervix. These forceps secured the uterine arteries. Blunt dissection was continued for some distance, separating the bladder and uterus, and reaching to the peritoneum forming the floor of Douglas' cul-de-sac. The patient was now placed in the Trendelenburg posture. A long median incision, reaching from the reflection of the vesical peritoneum to the umbilicus, gave access to the abdominal cavity, and exposed the mass. The ovarian arteries were now ligated at the infundibulo pelvic ligaments, also the arteries accompanying the round ligaments; two pairs of Dudley's long clamp forceps were placed upon the broad ligaments, under the ovary and the tube on each side. Along the outer side of the forceps, the ligaments were divided with the scissors down to their points, which rested against the mass. The entire mass was dragged further up, and an incision was carried across the face of the uterus, some distance above the vesical attachment, and a similar incision was made lower down, across the posterior surface of the supra-vaginal cervix. These flaps were pushed down,

and some intervening ligamentary tissue existing on both sides, between the forceps, and the ends of the long Dudley forceps, was snipped with the scissors. The blunt dissection turning down the flaps of peritoneum on the anterior and posterior surfaces of the uterus, was continued, entirely separating the uterus from the bladder and rectum. The empty uterus and fibroid tumors, ovaries and tubes, and severed ligamentary tissue, were lifted out en masse. The gauze compresses protecting the abdominal field of operation were removed. The Dudley forceps were removed, and the wounds in the peritoneum were carefully co-apted with running catgut suture. The field of operation was now carefully inspected and mopped out, the end of the table was lowered, the intestines were allowed to gravitate into the pelvic cavity, and the abdominal wound was closed with continuous catgut suture. The vagina was lightly filled with iodoform gauze between the forceps. The uterus which had been emptied of a two months foetus and placenta, as the first step in the operation, contained the two tumors which were evident at the first examination, and three other interstitial fibroids, ranging in size from a walnut to a hen egg.

Result. Recovered.

Note. At this writing, January 11, 1901, this patient is in excellent health.

Remarks. This case properly belonged to the Porro group, second classification of Godson, and marks my fourth successful case.

VAGINAL HYSTERECTOMY.

Mrs. aged 38. A widow, was seized two or three days ago with retention of urine. Dr. Stybr was called to her relief. After emptying the bladder of a large quantity of urine, he discovered a large fluctuating mass, filling the pelvis and reaching well up toward the umbilicus, and occupying

completely the left inguinal region, reaching across the median line. The uterus was crowded forward against the bladder, and toward the right side, and its cavity measured five inches in depth. The patient suffers a great deal of pain, her temperature is normal and her pulse rapid. She has been a very stout working woman, and her general appearance is good. There was no satisfactory information to be gained of the early history of the case. Present, Drs. Stone, Ahlers, Babb and Stybr.

OPERATION, MAY 5, 1898. The neck of the uterus was separated from the vagina. The left broad ligament was exposed, clamped with the uterine artery, and division of the ligament was made with the scissors, between the clamp forceps and the supra-vaginal cervix. This procedure was effected on the opposite side. Blunt dissection with the finger on the left side carried it into the cavity of the abscess sac. A pair of blunt closed scissors were directed along the finger into the abscess sac, withdrawn, the blades separated. There was a rush of pus followed this procedure, and not less than three pints of it escaped. It had an exceedingly disagreeable odor. A long tube was introduced into the sac, and it was thoroughly irrigated with an antiseptic solution, (creolin.) A large, long handled, sharp curette was now introduced into the sac, and applied to its walls as far as it was possible to do so, with caution. The irrigation of the interior of the sac and vagina was again repeated. The extirpation of the uterus was proceeded with as usual, with the aid of clamp forceps, bi-secting the anterior wall of the uterus, as it advanced. The right ovary and tube were removed. Three pieces of iodoform gauze, each nine inches square, folded diagonally were introduced into the cavity of the abscess sac. The points of the gauze diagonals protruding at the opening in the sac. Some iodoform gauze was placed in the vagina about the forceps, a catheter was introduced into the

bladder, and the handles of the forceps secured, by a strip of cotton and a ligature.

Twenty-seven hours after operation she threatened to collapse from heart failure, the oft repeated incident associated with old pelvic and abdominal growths, and prolonged contamination of the blood and heart tissues by septic products alone, or over work of the heart muscle, due to partially obstructed pelvic, or pelvic and abdominal circulation. She was braced up with nitro glycerine and whiskey, to which was added during the following day, valerian and digitalis, at the suggestion of Dr. Stybr, a most accomplished physician, and at one time Private Docent in the University of Prague. This attack came on in the twenty-seventh hour after operation.

At the end of the thirty-fourth hour she was lifted out on to a short table with leg supports, fastened to it, and in the lithotomy position, under a good light and under strict antiseptic precautions the forceps were all removed. The gauze in the vagina having been taken out of the way, the latter was carefully mopped out with cotton balls, soaked in five per cent solution of carbolic acid. The protruding ends of the gauze diagonals were picked up singly with the forceps, and one or two of them were entirely drawn out. The remaining one was partially drawn in to the vagina and a portion of its proximal end was cut away with the scissors. The proximal end of a strip of iodoform gauze, which had been inserted into the pelvis, was drawn down and a piece of its proximal end was cut off. Some clean iodoform gauze was now inserted into the vagina, and made to envelop the vaginal ends of the gauze remaining from the first dressing. The catheter was removed and the patient put to bed. Twenty-four hours later, or fifty-eight hours after the operation, the patient was again placed upon the dressing table, in a good light. All the gauze was removed from the vagina, including that extending into the abscess sac, and the vagina was mopped out with a five per cent solution of carbolic

acid. With the uterine dressing forceps a narrow strip of iodoform gauze was inserted into the opening into the abscess sac, and the vagina was lightly filled with iodoform gauze.

Forty-eight hours later, or in the early hours of the fifth day after operation, all the gauze was removed, patient on the dressing table, and with the speculum in place, the vault of the vagina and the interior of the sac, as far as it could be safely reached, by introducing a uterine irrigator, was thoroughly washed out, with a weak solution of creolin. Some iodoform gauze was placed in the vagina and the patient put to bed. On the sixth day the gauze was withdrawn from the vagina by the nurse, and daily vaginal douches of 1-6000 sublimate solution were began, and kept up until the sixteenth day, when the patient having been up for two days, was allowed to return home, soon after which her recovery was completed.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 24. Has been married two years. Suffered from dysmenorrhea until six months ago when she became pregnant. A year ago she had a distinct and easily recognized exudate on the right side of the pelvis. Soon after the advent of her pregnancy, she began suffering pain, which has increased to such a degree as to cause her to seek relief. Present, Drs. Stone, Babb, Ahlers and Kellar.

EXPLORATORY OPERATION, JUNE 1, 1898. A median incision admitted the hand, which was carried down to the right of the uterus with a view of examining the site of the exudate made out in the pelvis a year before. No mass could be felt in the pelvis, but numerous adhesions were broken up with the fingers on the right side of the pelvis. The anatomical relations to these adhesions were not discernible. They could only be felt giving way under the fingers. The hand was withdrawn and passed down on the left side and nothing abnormal was encount-

ered. The abdominal wound was closed with catgut step suture, covered with a compress of iodoform gauze, and supported by a broad band of adhesive plaster. The pain complained of disappeared, and did not return. The patient returned to her home after the twenty-first day from the date of operation, with her pregnancy undisturbed, and she was confined at term.

OVARIOTOMY.

Mrs. ———aged 33. I para. For years has suffered with backache, dysmenorrhea and leucorrhea. Was referred to me on account of a laceration of the cervix, which in my judgment would not account for the symptoms, inasmuch as a tumor as large as an orange occupied the right side and floor of the pelvis, and the left ovary is felt larger than normal. Present, Drs. Stone and Babb.

OPERATION, JUNE 9, 1898. Appendages on both sides, including the tumor, removed. The median incision was closed with step catgut, continuous suture. Time occupied in the operation, seven minutes. The small tumor when cut open, contained fat and hair. These tumors being congenital, account for the fact that her symptoms were existing throughout her menstrual life, and not occasioned by the laceration of the cervix.

Result. Prompt recovery.

VAGINAL HYSTERECTOMY.

Mrs. ———, aged 33. Patient was married eleven years ago. Her first child was still born at term, thirteen months after marriage. It was observed that after this labor her mental equilibrium was disturbed. This condition continued until she fell pregnant with her second child, born eight years and four months later. During this pregnancy

her mental condition was good. After the birth of her second child her mental disturbance returned and continued until she became pregnant for the third time, when her mental condition again became good and remained so until her third child was born. Her last child was born sixteen months ago, since which time her mental condition has been disturbed. At times she is insane and has attempted to take her own life. Her face is covered with acne punctatae. She complains of back ache. A bi-manual examination of her pelvic organs reveal a deep bi-lateral laceration of the cervix; a heavy sub-involuted uterus, a chronic endometritis, salpingitis and ovaritis and a laceration of the introitus vagina. She has menorrhagia also. Present, Drs. Stone and Smith.

OPERATION, JUNE 11, 1898. Total vaginal hysterectomy. Two pairs of clamp forceps on each side of the uterus. Patient recovered from her operation, but there was no improvement in her mental condition when she left the hospital. Nor in fact was there any expected at so early a period.

Note. Four days ago I directed a letter making inquiry as to this patients present condition. Dr. C. W. Smith, of Hollidaysburg, Pa., writes me that six weeks after her return home it was necessary to place her in an insane asylum where she still remains at this date, Jan. 16, 1901. No benefit has accrued to this woman from her operation so far as her mental condition is concerned, but her physical condition, I infer from the letter, is much better.

VAGINAL HYSTERECTOMY.

— — —, aged 26. I para. Double pyo-salpinx is found to be present. Present, Drs. Stone, Babb, Ahlers, Zimmerman, Botkin and Steffy.

OPERATION, JUNE 14, 1898. The uterus was separated from the vagina by the Pacquelin cautery and lateral incisions as

high as the vaginal attachment; blunt dissection was carried upward opening Douglas' cul-de-sac, and the utero-vesical space. The left tube, which was large, was ruptured in the process of blunt dissection, and a considerable quantity of pus escaped. As the uterus was drawn down it was completely bi-sected. One-half of it was pushed back into the pelvic cavity. Two pairs of clamp forceps having been placed, one pair controlling the uterine artery, and the other pair controlling the ovarian artery, with the corresponding sections of the broad ligament, the presenting half of the uterus with its corresponding ovary and tube, were released and removed by dividing the broad ligament to the inner side of the forceps. The remaining half of the uterus still in the pelvis was drawn into the vagina, and two pairs of clamp forceps were placed as upon the opposite side. The ligament was divided with the scissors, and the half uterus, with its corresponding ovary and tube, the latter containing pus, were released and removed. The cavity of the pelvis was flushed out. Iodoform gauze was introduced into the pelvis and vagina, a catheter into the bladder and the handles of the forceps were secured by a strip of absorbent cotton.

Result. Recovered.

ENTEROTOMY.

Private D. aged 26. Present, Majors Hysell, Baguley, Myers, Carlton; Capts. Dutton, Smith, Nesbitt and Lieut. Little.

Admitted to Second Division, 1st Army Corp Hospital, two days ago, with a chronic bloody diarrhea, fever, emaciation, and the statement that he had been ill for six weeks. He was admitted to the hospital on the afternoon of June 24, 1898. On June 25 his vomiting continued, and on the 26th he was vomiting fecal matter. He complained of intense pain during the afternoon, going into a state of collapse toward sundown. Under the influence of stimulants administered hypodermati-

cally, his heart was held up pending an effort for his relief. After 8 P. M. in an army hospital tent, by the aid of such light as we could command from lanterns, assisted by Majors Baguley and Capt. Dutton, I opened his abdomen by a free incision, and the following condition was revealed: An extensive peritonitis, the caput coli was twisted toward the median line, probably the half of one revolution, and adherent to the adjacent end of the ileum. The adhesions between the caput coli and ileum proved to be firm but were separated and the caput coli and lower end of the colon were released and straightened out. Two large perforations existed in the caput coli midway between the appendix vermiformis and the upper limit of the caput coli. Through these perforations two masses of vegetable matter completely plugging them, protruded. This vegetable matter was semi-exsiccated, and consisted largely of water-melon rind. The perforations were large, by means of the scissors the partition between them was divided and quite a quantity of vegetable matter was removed from the caput coli through this large opening. Capt. Dutton remarked "that it looked as if the patients' rations had consisted of bailed hay." The edges of this large wound were carefully pared and coapted with Czerny and Lembert sutures. Raw surfaces of peritoneum produced by the separation of adhesions were drawn together with Lembert sutures, the field of operation was cleaned up, and the abdominal wound was closed. The heat of the crowded tent in the Southern climate, and the perplexity of operating by the light of lanterns and a lamp or two, was very trying and was a good illustration of the difficulties surrounding army surgery. It was to me however an interesting experience, inasmuch as the operation was done on the old Chickamauga battlefield, on which I had served as the assistant Surgeon of the Ninth Regiment of Pennsylvania Volunteer Cavalry, in Sept. 1863, then an under graduate. At this moment I was

the Chief Surgeon of the Second Brigade, First Army Corps, in our war with Spain.

Result of the operation. The patient rallied and did admirably for six days. On the seventh day alarming symptoms again set in, and he died on the eighth day.

Autopsy. Perfect union had occurred, and the result of the operation was found to be perfect. But a second perforation had occurred at some distance from the site of the operation, and through this intestinal contents were escaping into the abdominal cavity, and from this and the resulting peritonitis, he died.

SUPRA-VAGINAL HYSTERECTOMY.

—, aged 47. A fibro myoma reaching to a point midway between the umbilicus and ensiform cartilage, occupies the abdomen. Recently the patient has met with a very serious accident. While out riding her horse ran away, and she fell backwards, maintaining her grip upon the horn of the saddle with her leg, while her shoulders and head hung over the opposite side of the horse. A gentleman, her companion, pursuing her upon another horse, told me subsequently that the horse ran for more than an eighth of a mile, with the patient in this position, before she fell from the horse to the pike. She is suffering from very persistent insomnia, has lost a great deal of flesh, has slight exacerbations of temperature, but attributes all her suffering to her tumor. Present, Drs. Stone, Babb and Purrington.

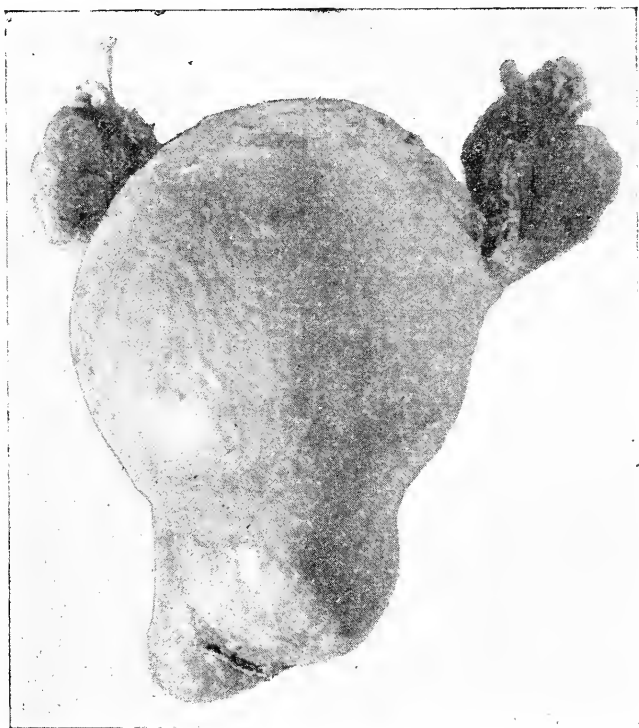
OPERATION, OCTOBER 1, 1898. A very long median incision, reaching far above the umbilicus, permitted extraction of the mass. Supra-vaginal hysterectomy was made in the usual way, and the wound was closed with continuous catgut suture. The tumor weighed nine pounds.

Result. Thirty days after operation, her abdominal wound had healed, and she had entirely recovered from the hysterectomy. Two days later her urine was reported cloudy, and having a bad odor. A specimen was given to Dr. Wolf, the bacteriologist, for examination, and he reported the existence of pus in it. The insomnia of which the patient complained before the operation, was still a very troublesome complication. Two days later, the thirty-fourth after the operation, the urine was bloody. On the thirteenth day after the operation she had a rise of temperature, the temperature having been normal for a week before. This elevation of temperature continued, and was increasing a little daily, when the pus was discovered in the urine; and when the urine became bloody, two days later, the temperature had risen to 103. Her stomach became very unsettled, rejecting her nourishment frequently. Pus continued to be present in the urine, in increasing quantity, the stomach continued to frequently reject nourishment, the high temperature persisted, and the concomitant evidences of septicæmia—diarrhea and mental aberration—followed. The patient died fifty-three days after the operation.

Autopsy, by Dr. Wolf. The patient had recovered from the hysterectomy, and the interior of the peritoneal cavity presented no evidence of disease. The peritoneum was opened and the kidneys exposed. The left kidney was normal. The right kidney was about three times its normal size, and contained four abscesses, one of which was communicating with the pelvis of the kidney.

The source of the septicæmia was now apparent, and the theory held is, that in some manner, the kidney was injured at the time of the horseback accident, which had occurred about nine months prior to the hysterectomy, and after which she was incapacitated from following her occupation; and after which her insomnia began, and her mental symptoms, which were called "queer spells," set in. Her urine had been exam-

ined for albumen before the operation, but the specimen examined did not yield any, and the history of the horseback accident was not at that time a part of our information concerning her. Its history was learned subsequently in a conversation with Dr. Grim, of Hot Springs, N. C., who witnessed the "run-away" accident, and who was the first to come to her assistance, and who attended her for some time after the accident.



MYOMA.



MYOMA WITH PREGNANT UTERUS. (Page 242).

VAGINAL HYSTERECTOMY.

Mrs. —, aged 40. II para. Laceration of introitus vagina and cervix uteri. Chronic endometritis, salpingitis and ovaritis, with recurrent pelvic peritonitis. Present, Drs. Stone, Babb and Rankin.

OPERATION, OCTOBER 20, 1898. — Circular incision with the thermo-cautery of the super-imposed cervical tissues. Blunt dissection with the finger and closed scissors, opening the cul-de-sac behind, and the utero-vesical space in front. On each side and close to the uterus, a pair of clamp forceps were placed on the lower segment of each broad ligament, including the uterine arteries. The ligaments were divided with the scissors on the uterine side of the forceps, as high as their points. Clamp forceps were now applied to the super-imposed middle section of the broad ligament on each side of the uterus, and the ligaments were divided with the scissors on the uterine side of the forceps. The anterior wall of the uterus as far as ex-

posed was bi-sectioned with the scissors, and drawn further down with strong cervix forceps, anchored in the walls of the incision. As the fundus advanced, the bi-section of the anterior wall was carried higher, and the walls of the incision were caught at higher points with cervix forceps. This procedure was continued until the bi-section had reached the top of the fundus, which now emerged into the vagina. With the scissors the process of bi-section was continued across the fundus in its median line, and some distance down the posterior wall of the fundus and body of the uterus. The appendages were now accessible. Patiently their adhesions were broken up, and a pair of clamp forceps was placed on each side, across the remaining portion of the broad ligament including the infundibulo pelvic ligament and ovarian artery. Division of the ligaments was made with the scissors on the uterine side of the forceps, and the uterus and appendages removed. The specimen included all of the left ovary and tube, all of the right tube and nearly all of the right ovary, a small bit of the latter having been nipped off with the scissors. The vagina and pelvis were irrigated with hot normal salt solution. An iodoform bandage, soaked in hot sterilized glycerine was carried between the forceps into the pelvis, its lower end protruding into the vagina; a second bandage of dry iodoform gauze was inserted into the vagina. A catheter was introduced into the bladder. The handles of the forceps were secured with a strip of absorbent cotton and a ligature, and the operation was completed. It had proven to be tedious, consuming one hour.

Result. Recovered.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 26. II para. Cervix and introitus vagina lacerated. Has been confined to bed for five months. Examination reveals a double pyo-salpinx.

OPERATION, Nov. 2, 1898. Division of super-imposed cervical tissues with the thermo-cautery. Lateral division of the same from circular incision, to and slightly above the vaginal junction on both sides. Wide blunt dissection with the finger and closed scissors, opening the cul-de-sac behind and the utero-vesical space in front. Introduction of two fingers into the cul-de-sac and stretching the wound, same as procedure in front. A pair of lock handled clamp forceps were placed upon the exposed lower segments of the broad ligaments and made to reach as high as possible. They included the uterine arteries. The ligaments were now divided close to the uterus, as high as the tips of the forceps. The anterior wall of the uterus, beginning at the external os uteri, was now bi-sectioned with the scissors, and as the uterus was pulled down, the bi-section was continued to the fundus as the latter advanced into vagina. A third and fourth pair of clamp forceps were now placed across the remaining portions of the broad ligaments, one on each side, and included the ovarian arteries. The clamped tissues were divided on the uterine side of the forceps and the uterus; both tubes containing pus, and the ovaries were removed. Two diagonals of iodoform gauze were carried, one on each side to the tips of the forceps, their ends resting in the vagina, into which a strip of iodoform gauze was inserted. Some cotton balls were inserted between the handles of the forceps and the margin of introitus vagina. A soft, self-retaining rubber catheter was introduced into the bladder, the handles of the forceps were surrounded with a strip of absorbent cotton and a ligature and the operation was completed.

Result. Recovered.

OVARIOTOMY.

Mrs. — — —, aged 47. Widow. Sterile. General health good until last two years. Recently there has been rapid enlargement of the abdomen which now contains a large

quantity of ascitic fluid, in which there is a solid tumor, movable with the uterus, reaching above the umbilicus and inclined toward the left side. Present, Drs. Stone and Babb.

OPERATION, JAN. 4, 1899. Free median incision. Evacuation of a large quantity of ascitic fluid, the residuum of which was mopped out with gauze sponges. A large white, apparently solid tumor, free from adhesions, was lifted out. Its pedicle, four inches broad and consisting of broad ligament, was ligated in three sections and divided with the thermo-cautery. The peritoneal cavity was flushed out with normal salt solution, a part of which was allowed to remain in the cavity and the wound was closed with continuous catgut step suture. Time consumed in the operation, twenty minutes.

Result. Recovered.

Note. The tumor weighed four pounds, and when bi-sectioned was found hollow in the center and contained one pint of straw colored fluid. The walls of the cavity were from an inch and a-half to two inches thick, solid and white. After eighteen months she is in good health. This is not the subsequent history of sarcoma, and I would add this case to Keith's of "weeping fibroids." The capsule of these tumors secrete the ascitic fluid, hence they are designated as "weeping." They are usually found in a state of progressive degeneration.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. ———, aged 28. II para. Examination reveals laceration of the perinæum down to the sphincter muscle. Bilateral laceration of the cervix uteri. Endometritis accompanied by menorrhagia. Retroversion of the uterus. Painful anal fissure.

OPERATIONS, MAR. 7, 1899. First—Curettage of the endometrium, irrigation of the same with the efferent or inner

tube of the uterine irrigator withdrawn from the outer, or afferent tube, and attached to the end of a rubber tube connected with the irrigator and introduced into the uterus. Application to the endometrium of a saturated solution of iodized phenol, irrigation to remove excess of latter. Second—Bi-lateral trachelorrhaphy. Four lateral surfaces denuded, clefts of the laceration cleared of cicatricial deposit with Schröder's catling knife. Cervix closed on both sides with catgut suture. Third—Perinæorrhaphy. Crest of the vagina at the upper limit of the laceration, seized with small volsellum forceps supported by an assistant, wide separation of the labia by the hand of an assistant on either side. The presenting mucous surface mapped out clearly; with Schröder's knife a linear incision was carried from the apex, resting at the crest, to the caruncula myrtiformis on the right side, a second from the apex to the caruncula myrtiformis on the left side; and a third, curvilinear incision following the junction of the skin with the mucosa, united the carunculæ. The surface of the curvilinear triangle thus described, was denuded with the same knife, and blunt dissection with the finger. A running catgut suture was inserted at the apex of the triangle, and carried down uniting the sides of the triangle down to the caruncle, where it was secured by a button hole stitch. The free end of the catgut suture was handed to an assistant, who made slight upward traction upon it, while three interrupted, sub-cuticular, deep catgut sutures were inserted between the external lips of the wound. Fourth—The point of the knife was now drawn through the anal fissure, dividing its base freely. Fifth—Anterior fixation of the fundus uteri, with a single buried silk worm gut suture, at and below the angle of a short, median abdominal incision, which was closed with catgut. Time consumed in the entire series of operations, forty-six minutes.

Result. Recovered. Patient returned home well, twenty-one days after operations.

OVARIOTOMY.

Mrs. —, aged 70. VI para. Abdomen began enlarging five years ago. She suffers no pain, fluctuation is distinct, and a diagnosis of multilocular ovarian cyst, is easily made, in confirmation of a diagnosis already made by Dr. Hazzard. Present, Drs. Stone, Babb and Hazzard.

OPERATION, MARCH 9, 1899. Short median incision, evacuation of two cysts with the trocar, withdrawal of the entire mass, ligation of the pedicle and division of the same with the Paquelin cautery. Time, six minutes. Abdominal wound closed with a running catgut suture, through the edges of the aponeurosis, and interrupted through and through silk worm gut sutures. Operation completed entirely in twenty-one minutes.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 30. III para. Bi-lateral laceration of the cervix, chronic endometritis, salpingitis and ovaritis. Anal fissure. Patient emaciated, neurasthenic and bed-ridden. Present, Drs. Stone, Smith, O'Brien and Wilson.

OPERATION, MARCH 11, 1899. First—Curretage of the endometrium. Second—Trachelorrhaphy. Third—Double salpingo-oöphorectomy. Fourth—Divulsion of the sphincter ani-muscle. Time occupied in the operations, thirty two minutes.

Result. Recovered, returned home twenty-four days later to finish her convalescence, which would necessarily be slow.

VAGINAL-HYSTERECTOMY.

Mrs. —, aged 52. Multipara. Old laceration of the cervix, corporeal endometritis, prolapsus uteri, uterine hemorrhages. Present, Drs. Stone, Babb, Smith and Wilson.

OPERATION, MAY 15, 1899. With thermo-cautery, blunt dissection, clamp forceps and scissors, as usual. The following departure only was made. The intestines were disposed to protrude into the vagina, the end of the table was raised, and the intestines allowed to gravitate away from the forcep tips. A short curved needle, was threaded upon a long catgut suture, and passed through the opposing edges of the peritoneum which were drawn together by several turns of the ligature between and around the tips of the forceps. The vagina was lightly filled with iodoform gauze, and the table was lowered. A self retaining catheter was introduced into the bladder, and the handles of the forceps secured by a strip of absorbent cotton and a ligature. Time occupied, twenty minutes.

Result. Recovered and returned home sixteen days later.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 29. I para. Examination, deep laceration of the introitus vagina, slight laceration of the cervix uteri, chronic endometritis with salpingitis and ovaritis. Chronic appendicitis. Present, Drs. Stone, Babb, Smith and Wilson.

OPERATION, MAY 18, 1899. First—Curettage of the endometrium. Second—Tait's operation for repair of the perinæum. Third—Median abdominal incision, followed by appendectomy and the removal of the adherent appendages on both sides. Wound closed with catgut suture. Time, forty six minutes.

Result. Recovered.

Note. In this and the preceding case, the formalin gut was too hard, acted as a mechanical irritant, and protracted the convalescence of the cases. A method for the proper sterilization of catgut by dry heat and without the aid of chemicals, beyond the use of ether for the removal of fat, will prove to be the only unobjectionable manner of preparing this suture.

OVARIOTOMY.

Mrs. —, aged —. Multipara. Last pregnancy seven years ago. Slight laceration of introitus and cervix. Menstrual periods characterized by small loss of blood, depth of uterine cavity normal, notwithstanding these last two facts, the uterus contains a fibroid tumor, which occupies the fundus of the uterus, and can be distinctly felt by bi-manual examination. To the left of the uterus there is a small, semi-elastic swelling, and a similar mass is felt to the right of the uterus. Present, Drs. Stone, Babb and Smith.

OPERATION, MAY 25, 1899. Trendelenberg posture, median incision. Direct examination, a fibro-myoma, interstitial, occupies the fundus of the uterus. To the left of the uterus a small par-ovarian cyst, and to the right of the uterus, an ovarian cyst, each about the size of a small orange. The appendages, with the associated cysts, were removed on both sides, and the wound closed with running catgut step suture.

The reader will note the fact that the fibro-myoma was not removed, trusting its future history to the effect likely to follow removal of the appendages. Seven hours after operation, at five P. M., the effect of the anæsthetic was entirely worn off and her pulse was 82. At seven P. M., the patient having complained an hour before of pain in the abdomen, the nurse found the pulse 140. She summoned me, and I immediately re-opened the abdomen on the bed, the ether being inhaled while I was cutting the sutures with the scissors. I found a large quantity of liquid blood and clots, the bleeding coming from the left pedicle, from which the ligature had slipped. I secured it with two pairs of hemostatic forceps, and re-ligated the bleeding vessels. Two or three pitchers of hot water were poured into the peritoneal cavity, which was mopped out with gauze sponges. The wound was re-closed by means of interrupted silk worm gut sutures.

Result. Recovered with a single stitch hole abscess, which did not delay her.

Note. January 15, 1891. This patient called at my office a few days ago in excellent health. The fibroid has not entirely disappeared, but is not giving the slightest inconvenience. June 1, 1901. Patient reported well.

OVARIOTOMY.

Mrs. —, aged 50. Has had a number of attacks of biliary colic. At present there is nothing abnormal about the gall bladder. For eight months she has had peculiar "fainting spells." Says she has had no pelvic troubles since her menopause began two years ago, however, I insisted upon an examination of the pelvic organs, and found a semi-elastic mass occupying the cul-de-sac of Douglas'. Present Drs. Stone and Hunter.

OPERATION, SEPTEMBER 5, 1899. Trendelenberg posture, median incision. A multilocular ovarian tumor was found on each side of the uterus. One of the tumors was kidney shaped, and the end of it filled the cul-de-sac. Both tumors were removed. Together they weighed three pounds.

Result. Recovered.

Note. The "fainting spells" have not been cured by the removal of the tumors. They still occur at long intervals, although the patient remains in excellent health.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 35. IV para. One abortion, last confinement four years ago. Has been in bad health for ten years. Examination, laceration of introitus vagina and bi-lateral laceration of cervix uteri. Chronic endometritis, salpingitis and ovaritis, several small anal fissures. Present, Drs. Stone, Babb, Rankin and Bippus.

OPERATIONS, SEPTEMBER 9, 1899. First: Curettage of the endometrium. Second: Trachelorrhaphy. Third: Perinæorrhaphy. Tait's method. Fourth: Divulsion of the sphincter ani muscle. Fifth: Laparotomy. Short median incision, followed by removal of the adherent uterine appendages, and closure of the abdominal wound. Time occupied, forty-eight minutes.

Result. Recovered.

Note. The patient has a floating kidney, operation for the restoration of which is postponed to a future time, as she is a feeble woman.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 36. VII para. Laceration of the introitus vagina and cervix. Endometritis, chronic. One internal hemorrhoid. Present, Drs. Stone and Hunter.

OPERATIONS, SEPTEMBER 21, 1899. First: Dilatation of the cervix with curettage of the endometrium. The curette re-introduced into the uterus for information, passes out into the peritoneal cavity. Curette withdrawn. Second: Perinæorrhaphy. Hegar's operation with interrupted silk sutures. Third: Hemorrhoid picked up with the forceps, separated from underlying tissues with the scissors, ligated at its neck, and cut away below the ligature. Fourth: Laparotomy. Median incision, puncture in the fundus ending in a wound in the peritoneum, one-half inch long, closed with three Lembert sutures of silk, anterior fixation of the fundus at and below the lower angle of the wound, with buried catgut suture.

Result. Uneventful recovery, patient returning home twenty-one days after the operation.

Note. Excepting in cases of malignant disease this is the first instance I have observed in which a curette passed through the uterine wall. In two other cases in which there was malignant

disease, I have known it to occur without any ill effect following. Pean formulated a rule that when the accident occurred, in malignant cases, the uterus should be removed.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. ———aged 28. V para. An inflammation of the left ovary and tube dates from her last labor, fourteen months ago. The right ovary and tube are apparently healthy. Has laceration of the introitus vagina. Present, Drs. Stone and Taylor.

OPERATIONS, OCTOBER 25, 1899. First: Short median incision, removal of adherent left ovary and tube, followed by closure of the abdominal wound. Second: Perinæorrhaphy. Tait's method. Time, thirty minutes.

Result. Recovered.

OVARIOTOMY.

Mrs. ———, aged 38. Sterile. A multilocular ovarian tumor occupies the pelvis and lower abdomen. Six weeks ago she was seized with a furious pain in the right inguinal region, followed by peritonitis, which lasted for one or two weeks. Present, Drs. Stone. Babb and Lindley.

OPERATION, NOVEMBER 1, 1899. Free median incision, exposing a cyst, the color of which was almost black. Extensive adhesions of the omentum, intestines and abdominal walls, were separated. These adhesions were all recent. The cysts were reduced with the trocar and withdrawn. The fluid withdrawn contained considerable disorganized blood. The twisted pedicle was ligated with silk and divided with the thermo-cautery. The left ovary, cystic and as large as a turkey egg, was also removed. The cavity was flushed out with normal salt solution, some of which was allowed to remain, and the wound was closed. Time, twenty-seven minutes.

Result. Recovered, and returned home in twenty-one days.

Note. This case was the last operated upon in my Private Hospital, which was discontinued one month after the operation. From the date of opening the Institution to its close, 1100 patients were admitted, with only a few exceptions they were all surgical cases. The entire mortality during the sixteen years was 35 surgical patients. During all that period, with the exception of eighteen months, I did not employ a resident physician, but performed all the duties myself. If any reader doubts the enormity of such a task, he may be convinced by imposing it upon himself.

OVARIOTOMY.

Miss —, aged 45. Done at West Penn Hospital. Cyst first discovered six years ago. Present, Drs. Stone, McConnell and Milligan.

OPERATION, DECEMBER 9, 1899. Median incision, reduction of the cysts with the trocar, ligation and division of the pedicle, closure of the abdominal wound. Time, eighteen or twenty minutes.

Result. Recovered and returned home three weeks later.

BASSINI'S OPERATION FOR INGUINAL HERNIA.

Mrs. —, age 42. Has had an inguinal hernia for six years. Now very large and irreducible, and "doughy." Evidently omental. Present, Drs. Stone and Babb.

OPERATION, JANUARY 9, 1899. An incision about three-quarters to an inch above Poupart's ligament, and parallel with it and ending close to the pubic spine, was made, dividing the skin, sub-cutaneous tissue, external and internal and transversalis muscles. The sac was opened, a large piece of adherent omentum was separated and cut away. The sac was separated

from the margins of the internal ring, given a half twist at the neck and ligatured. The sac was cut away. The internal ring was closed by suturing it with kangaroo tendon. The cut edge of the internal oblique and transversalis muscles made movable by dissection from the underlying tissues, was attached to the posterior border of Poupart's ligament. The cut edges of the external oblique were united by running suture of kangaroo tendon, and the wound in the skin was closed with interrupted silk worm gut suture. All covered by a dry antiseptic dressing.

Result. Recovered.

Note. The cure has proven to be permanent.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 48. Multipara. Small epithelial cancer of cervix uteri, diagnosed four weeks ago by Dr. Ansley. Present, Drs. Stone, Babb, Stewart, Ansley and Asdale.

OPERATION, MARCH 27, 1900. Circular incision of the superimposed cervical tissues, with the thermo-cautery, and lateral incisions with the scissors, latter from the circular incision to the vaginal attachment on each side. Blunt dissection with the finger and closed blunt scissors, opening Douglas' cul-de-sac and the utero-vesical space. Uterus cut out between four pairs of clamp forceps. Ovaries and tubes left. Strips of iodoform gauze were passed as high as the tips of the forceps, handles of the latter surrounded by a strip of absorbent cotton. Soft rubber catheter introduced into the bladder.

Result. Recovered.

NEPHRORRHAPHY.

Mrs. —, aged 35. Diagnosis. Floating kidney. Present, Drs. Stone, Babb, Stewart, Asdale and Dickson.

OPERATION, APRIL 10, 1900. The patient anæsthetized was placed on her left side, under which was inserted a hard

round pillow, wrapped in a large towel which had been wrung out of 1-4000 bichloride solution. The right costal iliac space was thus put on a stretch, and its limits increased. The knife was entered just below the twelfth rib, close to the outer border of the erector-spinae muscle, and carried obliquely downwards toward the iliac crest, a distance of three and one-half inches, dividing the skin, fat and superficial fascia, exposing at the upper end of the wound, the latissimus dorsi muscle, and at the lower angle of the wound, the external oblique. The exposed fibres of these muscles were divided with the scissors. The internal oblique and transversalis aponeuroses were now divided with the knife. The outer margin of the quadratus-lumborum muscle was retracted and the deep layer of the lumbar aponeurosis was pinched up between two pairs of hemostatic forceps, and an opening was made in it large enough to admit the blade of the scissors, with which it was divided throughout the length of the incision, in which four or five pairs of hemostatic forceps compressing divided vessels, were hanging. The fatty capsule was now opened and the kidney, pushed well up by an assistant, was reached. A quantity of super-abundant fat was removed with the fingers and scissors, and the kidney was brought into the wound. A long suture of kangaroo tendon was passed through the cortical substance of the kidney, at a point corresponding to the greatest convexity of its surface. A second similar suture was passed below this point through the same tissues. The free end of these sutures were now caught by hemostatic forceps, and the kidney was replaced behind the wound. The ends of the upper suture were passed through the deeper structures at the edges of the incision, as high up as possible, and the free ends of the second suture were passed through the same tissues at a lower point. When the upper suture was tied, the kidney was carried well upwards and when the second one was tied, the kidney was firmly anchored in position. A small rubber drain tube was laid in the lower angle of the wound, which

was closed above the tube with catgut step suture supported by transverse, through and through, interrupted silk worm gut sutures. The wound was covered with an antiseptic dressing and binder. The drainage tube was not removed until the fourth day, and was followed by slight suppuration in the wound.

Result. Recovered, and returned home six weeks later, the wound healed and the kidney in good position.

Note. In future cases, I will adopt drainage by means of strands of silk worm gut, a method which I learned of Edebohls of New York, and which I have many times used with great satisfaction in deep wounds. You cannot always be sure of the absolute purity of a rubber tube, and they produce sufficient local irritation to concentrate about them a great mass of leucocytes inviting the formation of pus. The anchoring of a right kidney at a high point is liable to be unsuccessful by reason of the constant impact of the liver caused by the movements of the diaphragm, and I am much disposed to favor the new procedure of Dr. Andrews, of Chicago, in which he rolls out the fatty capsule, and uses the deeper portion of it secured in the wound, as a sling to support the kidney.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 35. II para. Last labor five years ago, after which she developed hystero-epilepsy. Laceration of the introitus vagina, bi-lateral laceration of the cervix, chronic endometritis, salpingitis and ovaritis, with adhesions. Small anal fissure. Present, Drs. Stone, Hunter, Morrow, Vincent, Stewart and Asdale.

OPERATIONS, APRIL 12, 1900. First—Curettage of the endometrium. Second—Trachelorrhaphy. Third—Perinæorrhaphy. Fourth—Divulsion of the sphincter ani. Fifth—Laparotomy. Short median incision, through which the

appendages on both sides were removed. Time, forty-five minutes.

Result. Recovered.

COMBINED ABDOMINAL AND VAGINAL PAN-HYSTERECTOMY.

Mrs. —, aged 22. I I para. Youngest fourteen months old. After last confinement had a large pelvic abscess on the right side, which discharged through the vagina. Following this, in June 1889, and again in February 1900, a little more than a month ago, she had an attack of appendicitis. Both of these attacks were accompanied by extensive peritonitis. She suffers almost constantly from abdominal distress, is very nervous and emaciated. The uterus is not freely movable and one ovary adherent, is felt in the cul-de-sac of Douglas. The lower abdomen is tender on slight pressure.

OPERATION, APRIL 20, 1900. First—Curettage of the endometrium and swabbing out the cavity with iodized phenol. Second—Trendelenberg posture. Median abdominal incision. The end of the omentum, two loops of small intestine, the posterior surface of the uterus and right broad ligament, and caput coli, are all adherent en masse. They were all disconnected by tedious blunt dissection with the finger, liberating in the right inguinal region about eight ounces of serum, and a small quantity of pus. The left ovary, adherent in Douglas' cul-de-sac, with its adherent tube, were separated with the fingers. The tail of the omentum was cut away with the scissors, and its vessels ligated. No trace could be found of the appendix nor the right ovary. Some gauze pads were placed between the abdominal viscera and the wound, and the patient was shifted into the lithotomy position. A circular incision was made around the cervix with the cautery, and lateral incisions were made with the scissors, the broad ligaments were exposed, clamped

and divided, and the uterus, with the left ovary and tube, and the right tube, were removed per vaginam. The patient was now placed in the dorsal decubitus, and the lower abdomen and pelvis were flushed out from above downwards, through the vagina with normal salt solution. The abdominal wound was now closed with running step catgut suture, and the patient was again shifted to the lithotomy position, some strips of iodoform gauze were passed between the forceps into the pelvis, their ends protruding into the vagina, and the vagina was lightly filled with iodoform gauze. A catheter was introduced into the bladder, and the handles of the forceps were secured by a strip of absorbent cotton and a ligature.

The case had proven difficult and tedious, occupying forty five minutes. The forceps were removed in forty four hours, the gauze from the interior of the pelvis on the fourth day, some fresh gauze was put into the vagina, and removed on the sixth day, after which the vagina was irrigated with 1-6000 bichloride solution. The abdominal wound healed faultlessly.

Result. Recovered and returned home afoot, nineteen days after operation.

VAGINAL HYSTERECTOMY.

Miss —, aged 17. Double pyo-salpinx, gonorrheal. Present, Drs. Stone, Foster, Stewart, Dickson and McGraw.

OPERATION, MAY 17, 1900. By means of thermo-cautery, scissors, blunt dissection with the finger, and clamp forceps, the uterus and appendages were removed. Several loops of small intestine were found adherent to the pus tubes, and separated. The operation occupied thirty minutes.

Owing to continued vomiting after twenty four hours, the forceps were removed thirty-four hours after operation. The vomiting ceased after their removal, and the case gave no unusual trouble.

Result. Recovered perfectly in twenty one days.

EXPLORATORY LAPAROTOMY.

Mrs. —, aged 48. Sterile. The pelvis is occupied by a fibro-myoma and ovaries very much enlarged. The abdomen is distended with ascitic fluid. The patient is in good flesh and her face is the picture of health. Present, Drs. Stone, Foster, Gearing and others.

EXPLORATORY OPERATION, MAY 24, 1900. Free median incision, evacuation of a large quantity of ascitic fluid. Examination, the uterus contains a fibroid as large as an orange, interstitial, and located in the fundus. Both ovaries are cystic and as large as turkey eggs. The hand was now passed in and carried up to the liver, which was found somewhat enlarged, and containing a number of nodules, resembling a cancer or tubercle. The right ovary was removed for microscopical examination. The abdominal cavity was mopped dry of ascitic fluid, and the wound was closed with continuous catgut suture, supported by interrupted, through and through silk worm gut sutures. The wound healed faultlessly, and the patient returned home twenty-one days later.

Note. An examination of the ovary removed, proved it to be cancerous. January 17, 1901—The patient has since succumbed to continued progressive development of cancer in the abdominal viscera.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 29. II para. Youngest child two years old. Has a bi-lateral laceration of the cervix, and a slight laceration of the introitus vagina, and menorrhagia.

OPERATION, JUNE 3, 1899. During the curettage, preceding the intended trachelorrhaphy and perinæorrhaphy, it was discovered that she had carcinoma in the cavity of the uterus. The curettage was completed, and the cavity of the uterus

irrigated with sublimate solution. Hysterectomy was now substituted and completed. The ligaments and blood vessels being secured with clamp forceps. The time occupied in the entire procedure was thirteen minutes.

Result. Recovered, and returned to her home three weeks later.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 29. II para. Last labor several years ago. Has been in trouble for two years. Diagnosis, double pyosalpinx. Present, Drs. Stone, Foster, Martin and others.

OPERATION, JUNE 7, 1900. Circular incision of the cervix with the thermo-cautery. Lateral incisions with the scissors reaching to the vaginal attachment. Blunt dissection with the finger exposing the lower planes of the broad ligaments. Opening Douglas' cul-de-sac and the utero-vesical space. The uterus was now seized with two pairs of strong cervix forceps, upon which traction was made while with the scissors, beginning at the external os, the anterior wall of the uterus was bi-sectioned from below upwards as far as could be conveniently reached. The forceps on the cervix were transferred to the lips of the incision, at the upper angle of the wound. Traction was re-applied to the forceps, and as the uterine wall came down, the bi-section was continued through the fundus as it emerged into the vagina. The bi-section was carried down through the posterior wall to the point of beginning, the entire uterus being now bi-sectioned. No clamp forceps had been applied. To obtain more room for manipulation, one-half of the bi-sectioned uterus was pushed back into the pelvis, the other half remaining in the vagina. A pair of clamp forceps was now placed on the broad ligament of the proximal half of the uterus securing the uterine artery and as much of the broad ligament as the forceps would take care of. Division of the ligament on the uter-

ine side of the forceps was made with the scissors. A second pair of forceps was placed across the remaining portion of the broad ligament, securing the ovarian artery, and division of the ligament was made on the uterine side of the forceps with the scissors. Thus the left half of the uterus, with its pus tube and ovary, were released and removed. The right half of the uterus was now fished out of the pelvis, and drawn down into the vagina, and two pairs of clamp forceps were placed as upon the opposite side, and the ligament having been divided with the scissors, the right half of the uterus with its pus tube and ovary were removed. The pelvis was irrigated with normal salt solution and mopped out with some sterile gauze, held in sponge forceps. An iodoform bandage soaked in sterilized glycerine, was passed into the pelvis, its lower end left protruding in the vagina. A second dry iodoform gauze bandage was fed into the vagina. A soft rubber catheter was introduced into the bladder, the handles of the forceps were brought together and surrounded by a strip of absorbent cotton, secured by a ligature. Time occupied in the operation, twenty-five minutes.

Result. Recovered and returned home sixteen days later.

SALPINGO-OÖPHORECTOMY.

Miss —, aged 27. Has recurrent pelvic peritonitis, with adherent ovaries. During the last three years of the disease the patient has had hystero-epilepsy, whether arising from the disease, or co-incident with it, is uncertain. She is confined to bed one week out of each month, and is especially ill at that time. Present, Dis. Stone, Foster, Dickson and Boal.

OPERATION, JUNE 8, 1900. Short median incision. Separation of adhesions with the fingers, following the planes of cleavage, and withdrawal and ligation, and separation with the thermo-cautery, of the appendages on both sides. The fundus

of the uterus was fixed at and below the lower angle of the wound, which was closed by means of catgut suture.

Result. Recovered.

Note. January 18, 1901. The patient has experienced very decided improvement in general health, and her menstrual periods have ceased. The attacks of hystero-epilepsy continue.

SALPINGO-OÖPHORECTOMY.

Mrs. —, aged 33. Sterile. Has suffered for many years with chronic endometritis, salpingitis and ovaritis. Has been married eleven years. Present, Drs. Stone, Foster and Martin.

OPERATION, JUNE 28, 1900. Long median incision, removal of cystic ovaries and hypertrophied tubes on both sides of the uterus. Wound closed. Time, fifteen minutes.

Result. Recovered.

Note. The case is too recent to predicate final result. In many of these cases the full benefit does not accrue to the patient in a period short of two years, a fact which I make plain to all patients, before operation.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 37. Enormously fat. Sterile. Left pyo-salpinx. Severe dysmenorrhea. Present, Drs. Dickson, McGraw, Goehring and Asdale.

OPERATION, JULY 16, 1900. Anterior colpotomy. Duhrsen's method. After verification of the diagnosis, the uterus, with the pus tube and remaining ovary and tube, were removed.

Result. Rapid recovery.

OVARIOTOMY.

Mrs. —, aged 50. IV para. Last labor eleven months ago. Is still menstruating. In February last great pain in the

pelvis set in. She has grown feeble and thin of flesh. The lower abdomen and pelvis are occupied by a cystic mass, supposed to be ovarian.

OPERATION, JULY 27, 1900. Free central incision, followed by the removal of two multilocular ovarian cysts, adherent in the bottom of the pelvis, bound down by overspread broad ligaments. They were shelled out. No pedicle on either side. There was universal bleeding from the pelvic walls, and under surfaces of the broad ligaments. An hour was spent in endeavoring to arrest the oozing by hot sponge packing, the patient in the Trendelenberg posture. Finally oozing surfaces were pleated together by means of running catgut suture. The oozing having been checked, the abdominal wound was closed. The patient having been on the table one hour and thirty-five minutes. The case was an exceedingly bad one. The age of the patient, the rapid development of the tumors, their irritating character, provoking extensive adhesions, were all unfavorable symptoms, suggestive of malignancy.

Result. Recovered and returned home at the end of three weeks. Disease returned in the peritoneum six months later and terminated fatally.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 49. Multipara. Cancer of the cervix. Fatty heart. Present, Drs. Stone, Foster, Hall and others.

OPERATION, AUGUST 2, 1900. Removal of the uterus and appendages on both sides. Clamp forceps. Time consumed in the operation, eight minutes.

Result. Recovered and returned home sixteen days later.

Remarks.

Throughout the entire century just closing, cancer of the uterus has engaged the attention of the best medical and surgical talent. The evolution of the treatment has progressed from

attempts at the destruction of the diseased tissues by caustics, and the actual and galvanic cautery, to the partial or entire removal of the uterus and its appendages, with the enlarged lymphatic glands in the pelvis.

In the days of Sir James Y. Simpson and his colleagues, amputation of the "portio-vaginalis" was instituted. As late as 1878, Schröder extended this operation to "high amputation" of the cervix, pursuing it systematically and skilfully. Like amputation of the "portio-vaginalis," it was also disappointing in its ultimate results. The mortality of the operation was greater than ten per cent., and as far as could be ascertained, less than six per cent. escaped a return of the disease.

Almost simultaneously with the inauguration of "high amputation" by Schröder, Freund, in 1878, devised his operation for total removal of the cancerous uterus by the abdominal route. Its high mortality and its failure as a curative procedure have rendered it practically obsolete, excepting in cases where the body of the uterus is so large that it is not feasible to extract it through the pelvic outlet. With the Trendelenberg posture it has been revived.

In 1822, Sauter made the first total vaginal extirpation of the uterus. From 1822 to 1882, the operation made slow progress, its mortality being very high, approximately thirty per cent. From 1882 to the present time, under improved technique, the operation has become almost universal, and the mortality has receded, in cases in which the uterus is still movable, to almost zero. So far, therefore, as operative procedures for the treatment of the cancerous uterus go, we have probably compassed the field, and we now ask ourselves the question, *cui bono*?

The recurrences of cancer after the successful application of probably the greatest gynecological achievement of the century, namely, total vaginal extirpation of the uterus and its appendages, with the lymphatic pelvic glands, are probably almost as great in number as they were after the "high amputation" of

Schroeder. And our colleague, John Byrne, of Brooklyn, claims to have shown after his method of treatment, by curette, scissors and galvano-cautery, at least equally good results. Despite the fact that by means of these procedures the proportion of cures, except in cancer of the body of the uterus alone, has been lamentably small, yet they have brought to suffering women great palliation in this terrible malady, and for this alone they will endure.

We are, however, justified in saying that in order that we may secure more favorable and more reliable results in the treatment of cancer of the uterus than have hitherto been obtained, we must succeed in recognizing the disease with certainty, in its incipency, or at least, at a much earlier stage than that in which operations for its cure have been instituted up to the present time. Apparently, in view of our present knowledge of this subject, it seems a hopeless task to attempt to suggest anything further in the treatment of this malady. Hopeless as it seems, it is our duty to discuss it, and this is my apology for doing so.

The uterus is a hollow muscle imbedded in a net-work of lymphatics, which are continuous with the lymphatic system of the pelvis. It is lined with a secreting membrane, mucoid in its character, and extending from the os externum to the outlet of the Fallopian tubes. From its surface, extending into the deeper structures of the cervix, its epithelium forms the lining membrane of many racemose glands. From the surface of that portion lining the body of the uterus, its epithelium lines tubular projections extending in to the muscular tissue, the so-called utricular glands. The epithelium covering the vaginal portion of the cervix is of the pavement variety. Just within the margin of the external os it meets with the cylindrical epithelium, which is continuous upwards throughout the length of the Fallopian tubes. Occasionally the pavement epithelium is carried upwards in the cervical canal to meet the cylindrical epithelium at a higher point, or the cylindrical epithelium may, in case of

eversion in a lacerated cervix, be found meeting the pavement epithelium on the surface of the portio-vaginalis of the cervix.

The lymphatic system of the cervix is continuous with the lymphatic system of the body of the uterus, the lymphatic system of the vagina surrounding it, and all together they constitute only a portion of the lymphatic system of the pelvis.

The endometrium or lining membrane of the body of the uterus has been designated as mucoid, because it is not a true mucous membrane. Beneath its covering of cylindrical epithelium, its reticular structure is filled with glandular matter, which varies in quantity from the tenth to the seventieth year of life, being more abundant during the period of the greatest fecundity and gradually disappearing in advanced years.

The disease is exceedingly rare in the young, and not frequent after the fifty-sixth year of life. In the intermediate period, from thirty-five to fifty-five, it is of very frequent occurrence. Cancer is not of infrequent occurrence in sterile women, the subjects of fibroma or myoma. The great provoking cause of this disease is apparently the traumatism of child-bearing. Women with lacerations of the cervix, between the ages of thirty-five and forty-five, constitute a class among whom cancer of the uterus is a very common occurrence. Traumatism is now recognized to be clearly and potently a cause of cancer of the uterus. I have observed but one case of cancer of the cervix under the sixteenth year, occurring in a girl who had never been pregnant, and so far as I know, her case presented no apparent causation, not even the chronic catarrhal inflammation which is recognized as a suspected cause.

If there is a constant and specific cause for cancer of the uterus, independent of traumatism and chronic inflammation, it is yet undiscovered, or at least unproven.

Returning now to a consideration of our anatomical groundwork, we are ready to consider the pathology of the disease. Our thread of Ariadne running through the labyrinth, I as

strung upon it the pavement epithelium covering the portio-vaginalis, the cylindrical epithelium lining the cervical canal and its racemose glands, the cylindrical epithelium lining the endometrium, the utricular glands and Fallopian tubes, also the glandular tissue in the reticulated spaces of the endometrium, and the lymphatic system of the uterus and pelvis, all imbedded in cellular tissue. These structures are those primarily involved in the pathology.

Every case of cancer of the uterus, whether it begins in the cavity of the fundus or the cavity of the cervix, or at the external os, or on the surface of a papillary growth of the cervix, has its beginning in a cancerous degeneration of the epithelium existing at the point of attack and follows this thread.

For clinical purposes therefore, the varieties of cancer of the uterus have been designated as epithelial and cylindrical cancers. If the destructive process is superficial, the disease is designated as epithelioma. But if the disease has attacked the deeper structures within the cervix or body of the uterus, it is designated as carcinoma. The epithelial origin of cancer has been, by Waldeyer, long since demonstrated.

When the disease attacks the mucosa of the "portio-vaginalis," or the pavement epithelium, it not only extends laterally, but it also progresses by continuity of surface through the cervical canal into the cavity of the uterus.

The disease may have its origin in the cylindrical epithelium of the cervical canal below the internal os, and proceed to a destructive stage, the exterior surface of the "portio-vaginalis" remaining apparently free from the disease. Or in much rarer cases, the disease may have its origin in the cavity of the uterus, involving all its structures, the cervix remaining free from cancer. The most common point of origin however, is at the junction of the pavement and cylindrical epithelium.

Should the growth confine itself to the superficial structure of the "portio-vaginalis," it proliferates with great rapidity, pro-

ducing the papillary or "cauliflower" form of the disease. Its beginning is an ulcer with a hard and irregular margin, bleeding in response to irritation. Simple ulceration of the cervix uteri does not exist, and tubercular and syphilitic ulcerations are rare, an important fact in the diagnosis. In cases where doubt concerning the character of the ulcer exists, resort must be had to the microscope. When the disease has its origin in the distal ends of the cervical glands, a hard nodule or nodules may appear, or be felt beneath the covering of the cervix, or the nodule may protrude into the cervical canal. Later these nodules break down, leaving deep ulcers. When the disease begins in the utricular glands, nodules of cancer develop beneath the endometrium, and later break down, leaving deep ulcers. Later the entire wall of the uterus becomes involved in the process.

Cancer having its origin in the cervix, may, as already said, extend into the cavity of the uterus, or it may involve the vaginal walls, the bladder, and rectum, or following the lymphatics and cellular tissue, implant itself in the deep structures of the pelvis. The disease when disseminated to this extent, has passed beyond the domain of hopeful surgical treatment, and the patient can only be subjected to anodynes and local antiseptics.

The diagnosis of advanced cancer of the uterus is simple. The hemorrhages, the serous discharge, the existence in the vagina of a "cauliflower" growth, or a crater in the cervix, the margins of which are friable and foul, or the cervical canal having the appearance of a stuffed tomato, being filled full of degenerated tissue, breaking down at once upon application of the curette, should not deceive anyone of even limited experience. If upon examination by touch, a nodule is felt in the cervix, a diagnosis may not be possible until the nodule is excised, hardened, microscoped, and differentiated from a fibroma. If the portio-vaginalis is healthy, and the discharges from the

uterus are suspicious, it is only possible to arrive at a diagnosis by removing the endometrium by means of a sharp curette, and subjecting the scrapings to a microscopical examination.

The treatment of cancer of the uterus already recognized must depend upon the stage of the disease. Not only is this the fact, but the character of the treatment, whether it be medical or surgical, whether its object be curative or palliative, must vary, and its remote object should, in the interests of the specialist, be clearly defined to the friends of the patient.

It is morally wrong to "palm off" upon a patient a palliative for a curative procedure. When cancer has deeply invaded the lymphatic system of the pelvis, and involved the bladder or rectum, total vaginal extirpation of the diseased organ is useless, and should not be undertaken. When the surgeon has the good fortune to detect a cancer of the cervix or cervical canal, or of the endometrium, in its earliest beginning, total vaginal extirpation holds out not only the prospect of palliation, but the prospect of an occasional cure. Cases of uterine cancer having progressed to a stage of extensive ulceration, and presenting well-defined symptoms without marked lesions of the neighboring organs, may be subjected to total extirpation, with the hope of palliation, but without the prospect of a cure, save in very exceptional cases.

Many cases wherein total extirpation is not deemed advisable may be treated by means of the sharp curette, scissors and the actual or galvanic cautery, with subsequent antiseptic dressings, with the hope of palliation, in increased comfort, and life is therefore prolonged.

The surgical operations for the treatment of cancer of the uterus have but one object, namely: the removal of diseased tissues, as completely as is possible, by curette, scissors and cautery, or by total extirpation of the entire uterus, with or without adnexa and pelvic lymphatics. Whether the operation be by laparotomy or by vaginal section or both, the future re-

sults will differ but little if the disease involves extensively the portio-vaginalis. If confined to the body of the uterus, both methods give promise of future immunity.

Thoroughness of procedure, with attention to the principles of modern surgery, are the great requisites to success. Notwithstanding the thorough application of these principles to the management of cancer of the uterus already existing in patients presenting themselves for treatment, we are bound to conclude after carefully weighing the clinical results, that life is prolonged beyond a few months in but a small number, and that the cases cured comprise but a small fraction of the entire number treated.

If the victims of cancer of the uterus are to be reduced in number, the disease must be recognized in its incipency, or a prophylactic treatment must be instituted to prevent the occurrence of the disease.

I desire now to ask the attention of my colleagues to some remarks in the discussion of prophylaxis, in properly selected cases in which a diagnosis of cancer cannot be arrived at, yet in which the symptoms point toward the advent of cancer. They belong largely to a class of women between the ages of forty and fifty, who are frequently encouraged to bear their ills, by the illusive idea that they are passing through the "change of life." This class of women furnishes the greatest number of cases of cancer. Lulled to indifference by this most dangerous idea of the "change of life," they hide their symptoms until they are finally driven to some one who discovers too late that they have cancer of the uterus.

Reference to my own note book reveals the fact that the average age of patients applying to me with cancer of the uterus, is forty-three years and two months, and that the disease has been far advanced when they presented themselves. Many of them have been beyond the reach of any treatment, excepting that of

anodynes and antiseptics. In all of those to whom surgical procedures promised any relief, operations were extended.

These operations consisted of total vaginal or abdominal extirpation, or ablation of the cervix, with or without the application of the actual or other cautery. The average duration of life in these patients after operation has not exceeded eighteen months. Notwithstanding this a few are free from the return of the disease after several years. This experience is not unique, it is the experience of all operators. From such experiences we must conclude that operations for advanced cancer of the uterus are very unsatisfactory in their results.

As already stated, the average age of my patients coming up for operation with the disease well advanced, is a fraction over forty-three years. If a prophylactic measure is to be extended to this class of patients, it must be done not later, as a rule, than in the fortieth or forty-first year. But, out of rule, it may be extended to any suitable case occurring prior to or after that period.

With but one exception, the women whose cases have been here considered, have borne children. These had all incurred lacerations of the cervix. The picture presented by each and all of these cases at the average age of forty years, or three years prior to presenting themselves for operation, was as follows: the uterus was somewhat hyperplastic, its depth was increased an endometritis and a lacerated cervix existed, with profuse or irregular menstruation, and, in the majority, disease of the uterine appendages was present. If at this period these cases had been subjected by their physicians to the routine treatment of curetting the uterus, wiping it out with a strong chemical solution, and following this by trachelorrhaphy, or biconical section, with or without removal of the uterine appendages, some of these cases would have been rescued from future cancerous degeneration: It is unreasonable to suppose that all would have escaped. But had all these women at the

average age of forty or forty-one years, been subjected to total vaginal hysterectomy, not one of them would have suffered subsequently from cancer of the uterus. By reason of prior hysterectomy, the mortality would not have exceeded four per cent., and this would stand against almost one hundred per cent. mortality within twenty four months after the operations were done by reason of existing cancer.

In all cases in which there is marked disease of the uterine appendages, the treatment by curetting and trachelorrhaphy or biconical section is insufficient to secure the patient against the future. In those cases where disease of the appendages is not apparent, curetting, biconical section or trachelorrhaphy may be considered sufficient. But in both classes of cases at this period of life, I believe that total vaginal hysterectomy is justifiable and advisable.

My colleagues may regard this as very radical, but the treatment of cancer of the uterus, after the disease has been established, save in exceptional cases, is a failure. If we are to improve upon present conditions, it must be in the more extensive repair of lacerations of the cervix in the earlier years of the child-bearing period, and in the inauguration of radical treatment by hysterectomy, when the conditions leading up to cancer are discovered.

So far as it is possible, every child-bearing women should be kept under observation, and especially between her fortieth and forty-fifth years, that the condition of her pelvic organs toward the close of her child-bearing period may be determined, and that she receive the best treatment indicated for her future immunity from cancer of the uterus.

Some practitioners of medicine do not realize the importance of those symptoms which are so frequently the precursors of cancerous degeneration in the uterus, and some few fail to recognize the disease in its earliest stages.

To put my view more forcibly before the reader, let him consider it from the standpoint of a mathematical problem. Given one hundred cases of uterine cancer treated by vaginal hysterectomy, results, four deaths, ninety six recoveries. Credit the latter with an average of two years of life after the operation, thus we have the result, gain in human life, 192 years.

Given the same one hundred cases subjected to vaginal hysterectomy from two to three years earlier, prior to the advent of cancer. Result, deaths, four; recoveries, ninety six. Credit the latter with an average of ten years of life after the operation. Thus we have the result: a gain of 960 years of human life. Take the difference in these results, viz: 768 years of human life, in favor of prophylactic operating.

At a recent meeting of the American Gynecological Society. Dr. A. P. Dudley recommended hypodermic injections of Thiosinamine, Merck, after operations for cancer.

OVARIOTOMY.

Miss —, aged 64. Slowly developing multilocular ovarian cyst. Present, Drs. Stone, Foster, Gearing, Rugh, Dickson, McGraw, Robbins, Emmerling and others.

OPERATION, OCTOBER 1, 1900. Three and one-half inch median incision, down to the peritoneum, with a single stroke of the knife. Peritoneum divided with the scissors. Separation of slight omental adhesions. Reduction of cysts with the trocar, withdrawal of the entire mass, ligation of the pedicle and division of it with the Pacquelin cautery. Closure of the wound with running catgut step suture. Time occupied, twenty-three minutes. Cysts and contents weighed twenty pounds.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Mrs. —, aged 31. Bi-lateral laceration of the cervix, laceration of introitus vagina, right salpingo-ovaritis, with en-

dometritis, and retroversion of the uterus. Patient feeble. Present, Drs. Stone, Foster and Goehring.

OPERATION, OCTOBER —, 1900. First—Curettage of the endometrium, irrigation of the cavity, followed by swabbing it out with a saturated solution of iodized phenol.

Second—Trachelorrhaphy. The surfaces to be united were pared with Schröder's catling knife and the clefts of the laceration cleared of cicatricial tissues with the same. Both sides of the cervix were closed with interrupted silk suture.

Third—Perinæorrhaphy. The crest of the vagina was seized with a small vulsellum and drawn forwards and upwards. The labia were held apart by the hands of the assistants, and a spherical triangular surface, the apex resting under the vulsellum forceps and the base extending between the carunculæ myrtiformes at the junction of the skin and mucosa, was rapidly denuded with Schröder's knife, and the edges of the wound were united with transverse interrupted silk sutures down to the approximated carunculæ, and from thence downwards to the lower angle of the approximated edges of the superficial wound.

Fourth—Divulsion of the sphincter ani.

Fifth—Laparotomy. Dorsal decubitus, end of the table elevated six inches. Short median incision. The right ovary and tube, some adhesions having been separated by the fingers, were drawn into the wound, a ligature was placed on the ovarian artery including a portion of the infundibulo pelvic ligament, and one on the anastomosing branch of the uterine artery, crossing the tube at the horn of the uterus, and the ovary and tube were cut out between them.

Sixth—The protecting gauze was withdrawn, the fundus of the uterus was brought forward and fixed in and below the lower angle of the wound, with two buried sutures of formalin catgut, with which the small wound in the abdominal wall was also closed. Time occupied, forty five minutes.

Result. Recovered.

COMBINED GYNECOLOGICAL OPERATIONS.

Miss —, aged 28, A working woman, says that she has already been subjected to surgical operations upon three occasions, for the cure of the malady with which she now presents herself. She has first, procidentia uteri, a scar in the median line of the abdomen indicates the site of a former laparotomy. The uterus can be pushed into position, and bi-manually, her right ovary can be felt enlarged, the left ovary cannot be found. Present, Drs. Dickson, Foster, McGraw and others.

OPERATION, OCTOBER 15, 1900. The patient was placed in the left lateral, or Sims position. The end of the blade of a Sims speculum was anchored with a ligature to the posterior lip of the uterus; the uterus was now pushed into position, the blade of the speculum following. When traction was made upon the speculum, opening up the vagina, a curved uterine sound was passed into the uterus to make sure that the fundus of the uterus was ante-verted. The axis of the uterus now occupying its proper relation to that of the vagina, the operation began. With Schröder's knife two semi-circular strips of vaginal tissue, one-third of an inch wide, one on each side of the cervix, each strip about an inch and three eighths long, were dissected off. The neck of the uterus rested between the concave margins of these strips. On each side of the uterus these raw surfaces were brought together in the following manner: the upper and lower edge of each crescentic, denuded surface were brought together with three interrupted silk worm gut sutures, the free ends of which were cut away. The union of these surfaces lifted the neck of the uterus still higher into the hollow of the sacrum. Continuing with the knife, two strips of tissue, each one third of an inch wide, were dissected from the lateral walls of the vagina, following the sulci of the vagina from the closed wounds at the cervix to the vaginal outlet. The lateral

edges of each of these denuded surfaces were now brought together by means of silk worm gut suture, passed diagonally, or obliquely, from below upwards. The sutures were tied and their long ends cut away. The silk suture anchoring the blade of the speculum to the posterior lip of the cervix, was now divided, and the speculum was released. The uterus was now held in perfect position, and the patulous vagina was considerably retrenched, its anterior wall was drawn upwards, giving more support to the bladder. The vagina was irrigated with 1-4000 bichloride solution, and the patient was placed in the Trendelenberg posture, the table being raised about only one-third of its entire elevation, and the abdomen was opened by a short median incision through the site of the former wound. The right ovary was drawn up and found to be about as large as a pullet's egg, and cystic. The ovarian and anastomosing uterine arteries were ligated, and the ovary was cut away. The posterior surface of the fundus uteri was now anchored with two buried silk worm gut sutures, at and below the angle of the abdominal wound. The abdominal wound was now closed. Lateral elytrorrhaphy as applied to procidentia uteri, was devised by Dr. E. C. Dudley, of Chicago, and the method followed in this case may be found in his recent work on "Diseases of Women," page 536. It is now ten months since the operation was made, and the patient is completely cured of her procidentia, et cetera.

VAGINAL HYSTERECTOMY.

Mrs. —, aged 48. Sterile. Dysmenorrhæ. Watery leucorrhæ, menorrhagia and pain. Bi-manual examination. The uterus is found to contain multiple fibroids. Some months ago Dr. Baumgarner could distinctly make out a small tumor in the left groin, above Poupert's ligament, which he supposed to be ovarian. Recently he has failed

to find it, and in my examination I could get nothing but the uterus, enlarged and irregular, in bi-manual grasp. The examination was not made under an anæsthetic. The subsequent history of the case with reference to this small tumor, which had slipped away from its former location, is very interesting and unusual, and presents a feature which I am inclined to think has never occurred before in the history of vaginal hysterectomy. Present, Drs. Stone, Hall, Meredith, Baumgarner and others.

OPERATION, OCTOBER 18, 1900. The vaginal extirpation of the uterus without the ovaries was made between eight pairs of clamp forceps. The end of the table was raised about six inches from the horizontal, during the operation. Before inserting the gauze into the pelvis, the forceps were separated, four upon either side, and as the vagina was distended by lateral pressure from the forceps, I observed at the extreme upper end of the forceps, a small body protruding from above, and apparently pouting between the forceps. While I was looking at it, my assistant, Dr. W. L. Stone, observed it and said to me. "What is that?" I replied, the bladder. An iodoform gauze bandage was passed to the tips of the forceps, and a square of iodoform gauze was fed into the vagina. A soft rubber catheter was introduced into the bladder. Not a drop of urine flowed out through the catheter. The handles of the forceps were surrounded with a strip of absorbent cotton, and secured by a ligature. The end of the table was now dropped to a horizontal position, and immediately four ounces of urine flowed out through the catheter. I said to Dr. Stone, the accumulation of that urine in the fundus of the bladder was depressing it between the tips of the forceps, and explains what we were looking at. The forceps were removed at the end of forty six hours, and all the gauze at the end of the fourth day, when some fresh iodoform gauze was introduced into the vagina with the aid of a speculum. This gauze was removed by the nurse at the end

of the sixth day, and daily douches of 1-6000 sublimate solution were given.

Result. She was out of bed on the eighth day after her operation, and went home on the eighteenth day after operation, in good condition. About one week after her return home, Dr. Baumgarner, without being sent for, made a social call upon her. He ascertained that she was having a slight vaginal discharge, which was offensive. He ordered vaginal douches consisting of a weak solution of permanganate of potassium, and asked me over the telephone what I thought was causing the discharge. This was twenty five days after the operation. I replied that I supposed that a small slough made by the forceps, was adhering somewhere, and that I thought his prescription proper. Sixteen days later, the attendant who administered the douches, carried to the Doctor a small tumor, about the shape of a boy's top, and weighing probably an ounce and a half, and having attached to its small end, about one-half inch of pedicle, half the thickness of a lead pencil. The end of this attached bit of pedicle showed evidence of sloughing. The patient had dropped this out of the vagina upon getting out of bed, after the douche that morning. Dr. Baumgarner brought the specimen to me, and I bi-sectioned it with a knife, and found it to be a pediculated fibro-myoma.

At the time of the operation the uterus was found to contain twelve small fibroids, ranging in size from a boy's marble to an English walnut. There was no evidence on the surface of the specimen that a pediculated fibroid had been detached from it. The question now arose, where did this pediculated fibroid come from, and how did it come? When the gauze was removed from the interior of the pelvis and vagina on the fourth day, with the aid of a speculum and good light, it was not in the vagina, and did not follow the gauze down out of the pelvis.

I think the following explanation will fit the case. It was a pediculated fibro-myoma, which sprang from the broad liga-

ment or round ligament, and was felt at one time by Dr. Baumgarner above and close to Poupart's ligament. It was also the object which both Dr. Stone and I took to be the fundus of the bladder, pouting downwards from above, between the forcep tips. After the removal of the gauze from the interior of the pelvis on the fourth day, it descended into the vagina, through the unclosed wound, and the wound contracted around its pedicle, and upper conical end. As the wound cicatrized around the pedicle, the circulation of the tumor was cut off, and the pedicle separated by sloughing close to the conical end of the tumor.

The patient has made an excellent recovery.

CHOLECYSTOTOMY.

Mrs. —, aged 51. Has suffered many years with attacks of biliary colic. Is very fat. Present, Drs. Stone, Hall, Dickson, Meredith and others.

OPERATION, NOVEMBER 5, 1900. An incision from the tip of the tenth costal cartilage was carried obliquely downward to a distance of three and one-half inches, exposing the peritoneum, which was snipped up and divided with the scissors. The gall bladder, almost entirely empty of fluid was found well back under the liver, imbedded in adhesions. Careful but persistent effort in its separation from intestines and peritoneum was successful. The gall bladder, bleeding almost over its entire surface was drawn into the wound, and surrounded by protective gauze, passed into the cavity and under the liver. The dome of the gall bladder was split open, and from its cavity and that of the cystic duct, ten stones were extracted, with scoop and forceps. Now empty, it was easy of manipulation, and better exposure. Its bleeding surfaces were seared with the Pacquelin cautery, and the edges of the incision in its dome were stitched to the edges of the deeper layers of the abdominal wound at its

upper angle. The gauze was withdrawn and the remainder of the wound was closed with step catgut suture for the deeper portions, and deep interrupted silk sutures for the skin and fat layer. The wound was also traversed with six strands of silk worm gut suture for capillary drainage.

Result. Recovered and returned home three weeks after the operation.

Note. Text books all speak of the various incisions for exposure of the gall bladder, I have used a number of incisions. In a lean subject, the problem is much easier than in a very fat one, but is much simplified by remembering that division of the structures lying above the first muscular plane have nothing to do with the future integrity of the abdominal wall. It is therefore well in fat subjects to eliminate the perplexity by making a very long incision through the skin and fat layer, and then to proceed as if operating upon an abdominal wall of ordinary thickness. The normal location of the root of the gall bladder is close to the tip of the tenth intercostal cartilage, from this, as a starting point, the incision may follow parallel with the costal border, or descend vertically, or obliquely, through the abdominal wall. In case the operator prefers, the incision may be made vertically through the rectus muscle. All of these incisions start in the upper area of the epigastric region, in which part of both the right and left lobe of the liver come in contact with the abdominal wall, and extend across the region, from the ninth right, to the eighth left costal cartilage, about three inches below the xipho-sternal articulation. The gall bladder having been secured and brought up into the angle of the wound, and emptied by means of the aspirator, of fluids, two fingers of, or the entire right hand, may be introduced along its posterior border, following the cystic duct to the edge of the lesser omentum, extending between the transverse fissure of the upturned liver, and the lesser curvature of the stomach. At the right free border of the lesser omentum, the cystic duct,

one and one-half inches long, joins the common duct, next to which lies the portal vein and the hepatic artery. Between these vessels in front, and the inferior venæ cavæ behind, the caudate lobe of the liver above, and the duodenum and the hepatic artery below, is the opening lying between the greater and lesser cavities of the peritoneum, known as the foramen of Winslow, readily admitting the finger.

The hepatic duct, one and one-half inches long, is palpated by the finger passed through this foramen. Stones impacted in the hepatic duct can often be removed only by incision of the wall of the duct. To always close the resulting wound in the duct by suture is almost impossible, through the ordinary incision. When the stone occupies the common duct, it may be safely incised and the wound may be sutured. When the stone is impacted in the cystic duct, efforts may be made to crush it with the thumb and finger, or while it is supported with the finger of one hand, to reduce it with an instrument introduced through the gall bladder, previously opened and emptied.

Efforts may be made to extract it with the scoop or various forms of forceps. If these measures fail, the duct may be incised and the stone extracted, and the wound closed by suture. This, in my judgment, is a very safe procedure, because the sutured wound will not be subjected to much pressure from within, a fistulous opening being established between the cavity of the gall bladder and the wound in the abdominal wall. Should the operator however, prefer not to make an incision, he may take a pair of broad bladed clamp forceps, the blades of which he has covered with rubber tubing, and compress the duct, crushing the stone. Subsequently getting rid of the fragments with the scoop and reverse irrigation, by passing beyond the fragments, the efferent tube of a uterine irrigator, and slipping over the end of it the rubber tube leading to the reservoir

of sterile normal salt solution. The danger of crushing stones in the cystic duct is almost nil, if carefully done.

In doing biliary surgery I have had no experience with lumbar drainage, but from anatomical considerations, am disposed to look upon it very favorably.

The history of cholecystotomy dates from 1618, when Johannes Fabricius is said to have removed gall stones from the gall bladder of a living subject. In 1733 Petit, a member of the Royal Academy of Surgeons, of France, described an operation for the removal of gall stones. Another century elapsed when Sebastian advocated opening the gall bladder, having first secured an adhesion between it and the peritoneum. How he effected this union between the peritoneum of the gall bladder and the peritoneum of the abdominal wall, I do not know. But in 1859, Thudicum recommended suturing the gall bladder to the abdominal wound, and opening it some days later. Eight years later, cholecystotomy was first done in the United States by Bobbs, of Indianapolis. He closed the opening in the gall bladder by a running circular silk suture, his patient recovering. In 1877 or 1878, Dr. Marion Sims originated the name, cholecystotomy, both performing and advocating the operation, practically adopting Thudicum's method. The exception being immediate opening of the gall bladder.

Since 1880 the operation has been common among surgeons, whose attention has been especially directed to this subject. Naturally cholecystotomy has lead to cholecystectomy, cholecyst-enterostomy and choledochotomy.

Since the introduction of Murphy's button, should the operator elect, he may anastomose the gall bladder with the duodenum, and close the abdominal wound in its entire length.

Cholecystectomy, or entire removal of the gall bladder was introduced by Langenbech. The operation becomes advisable under the following conditions: first, where the gall bladder is so short that its fundus can not be sutured in the abdominal

wound; second, where ulcers or lacerations produced in operation, exist, and where the gall bladder tissues are so thin, or diseased, that suturing is unsafe; third, in cases where the cystic duct has become impervious. The gall bladder is separated from the liver, from the fundus towards the neck, until the cystic duct is reached, when two ligatures are placed upon the latter, and it is divided between the ligatures. The proximal cut end of the cystic duct should be covered with its peritoneum, as in appendectomy. The operation has carried with it a higher mortality than cholecystotomy.

In palpating the epigastric region, when endeavoring to make out the existence of gall stones, it is well to remember that in about four per cent. of cases, the stone is in the common duct, and that very frequently there is but one stone. In about two-thirds of the cases the stone will be found in the ampulla of Vater, and in about one-third of the cases, in the hepatic end of the common duct.

In these cases the gall bladder is not dilated, and is often contracted or atrophied. In cases of cancer involving the termination of the duct, the gall bladder will be found constantly dilated. So that the examiner must bear in mind that when he finds upon palpation, a distended gall bladder, that he may have to deal with a malignant case. This curious pathological condition, in cases of stone in the common duct, has been explained by my friend, Christian Fenger, of Chicago, (one of the best surgeons in the world) in this way. He has proven that the stone acts precisely as a ball valve, just as in the kidney, ball valve action of a stone leads to a hydronephrosis.

The examiner must also remember, that Courvoisier of Paris, has pointed out the fact that only about one-half the cases of obstruction in the common duct, are due to stone. The remaining causes of obstruction being due to tumors, strictures, and malignant disease. In operating upon such cases care must be observed not to wound the *venæ portæ*, limiting the posterior

boundary of the foramen of Winslow, or the vein or artery accompanying the common duct. To best conserve this caution the stone should, if possible, be worked down into the ampulla of Vater, into which the incision should be made, and the stone extracted. To suture the wound is difficult. Some operators have advised the passing of the sutures before the stone is extracted, and Halstead has devised a small hammer for insertion into the open duct, over which the sutures are passed. I have had no experience with either of these devices. An extension of the incision obliquely upward gives better opportunity to do the work.

I especially commend Fenger's article on this subject to the reader.

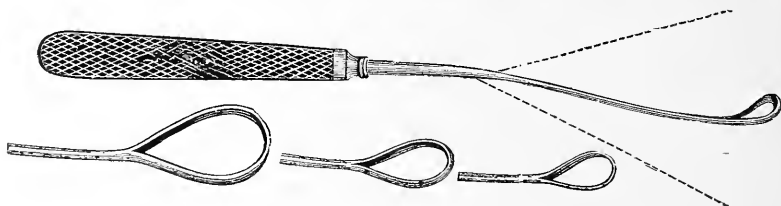
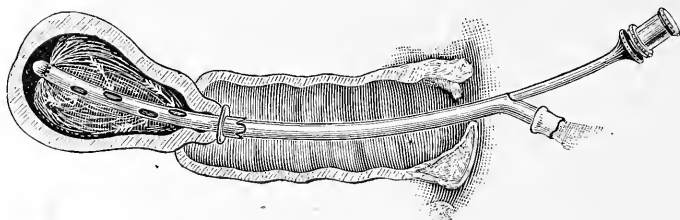
DOUBLE OVARIOTOMY AND APPENDECTOMY.

Miss —, aged 29. Within the last three years has developed a large multilocular ovarian cyst. Present, Drs. Stone, Goehring, Cook, of McDonald, Pa, Crain of Montana, and Van Horn of Pittsburg.

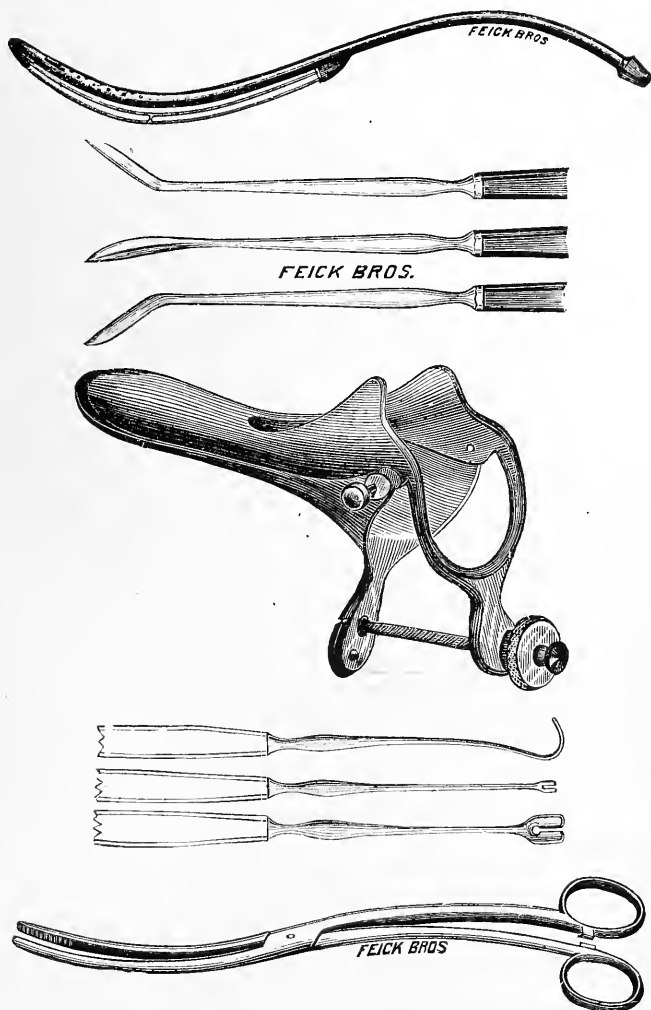
OPERATION, AT THE PASSAVANT HOSPITAL, APRIL 12, 1901. Median incision, separation of slight omental adhesions, reduction of large cyst with the trocar, delivery of the entire mass, ligation and division of the pedicle. The opposite ovary, found multi-cystic, removed, after ligation and division of its pedicle. The vermiform appendix, five inches in length, was also removed. The protecting gauze pads were removed, and the wound closed by through and through interrupted silk worm gut sutures. Patient on the table twenty-six minutes.

Result. Recovered.

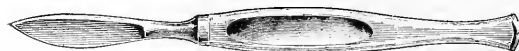
PERSONAL EXPERIENCES IN
GENERAL INSTRUMENTS.



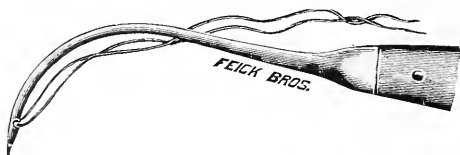
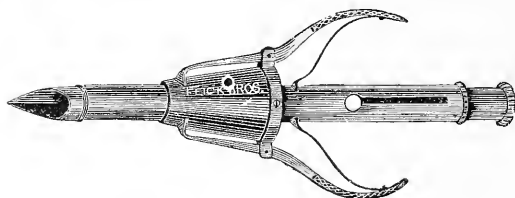
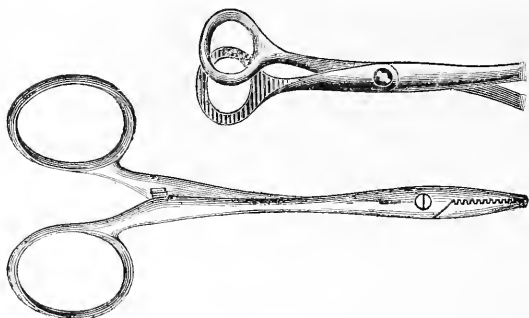
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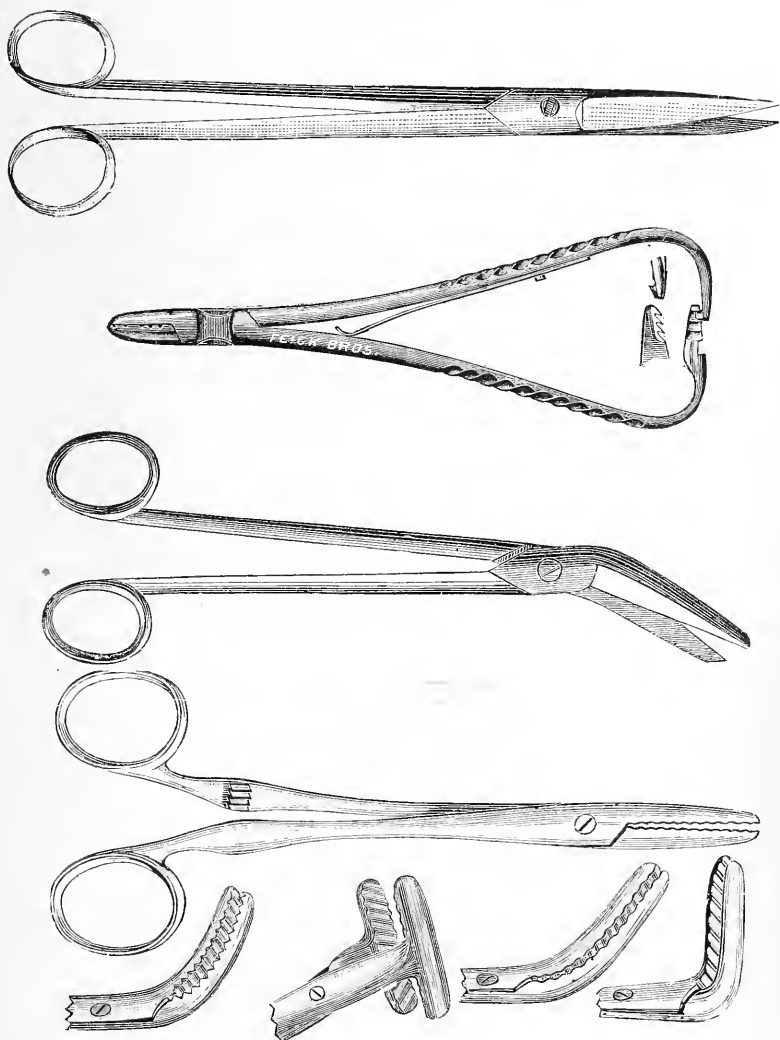
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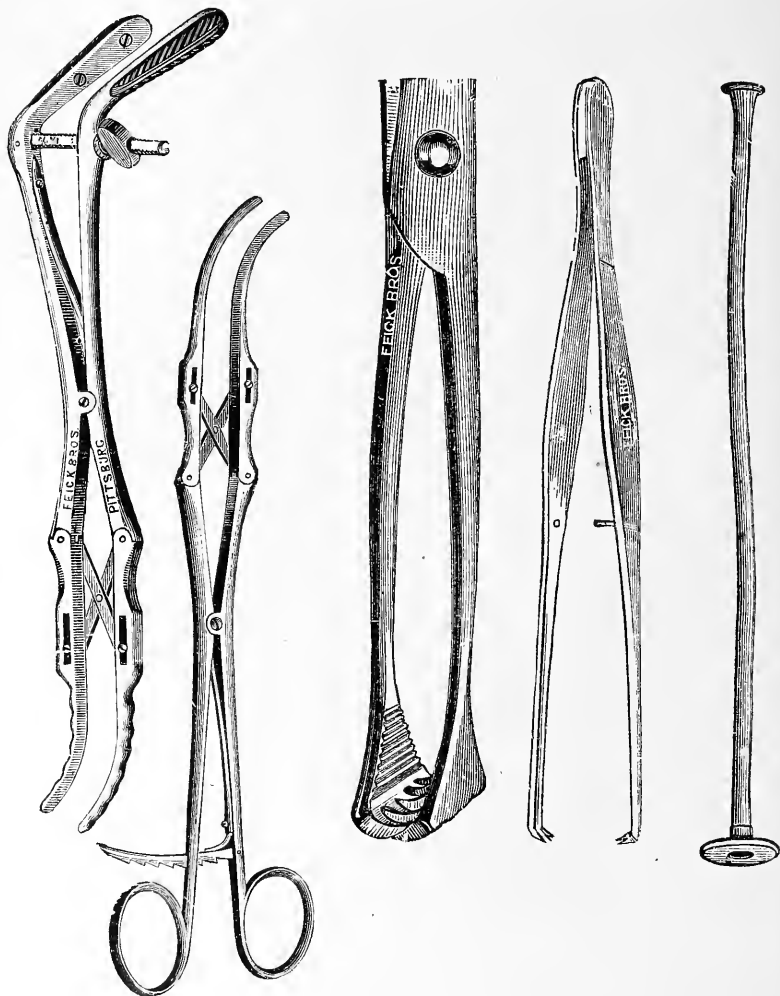
FEICK BROS.



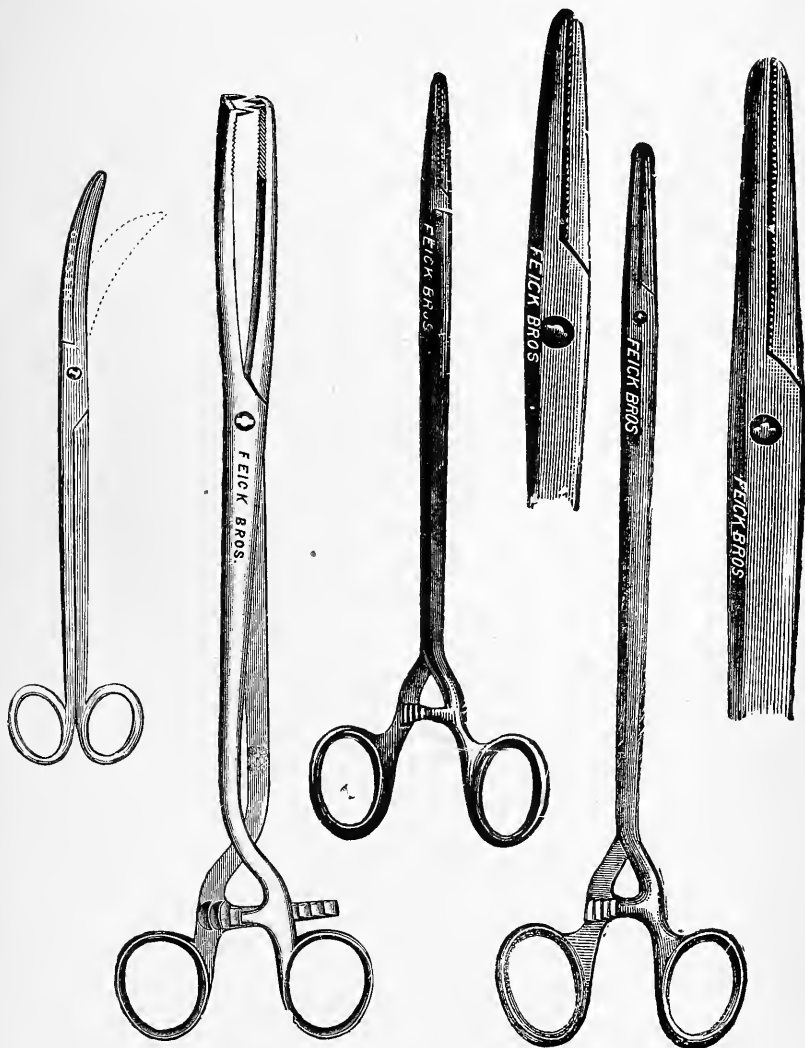
LAPAROTOMY INSTRUMENTS.

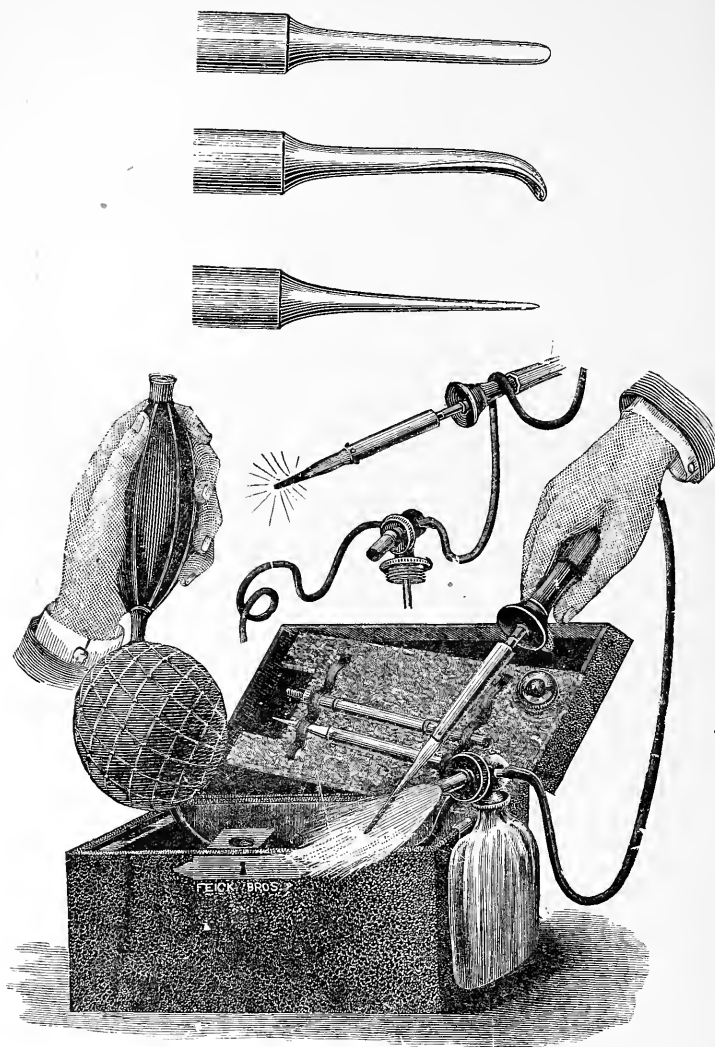


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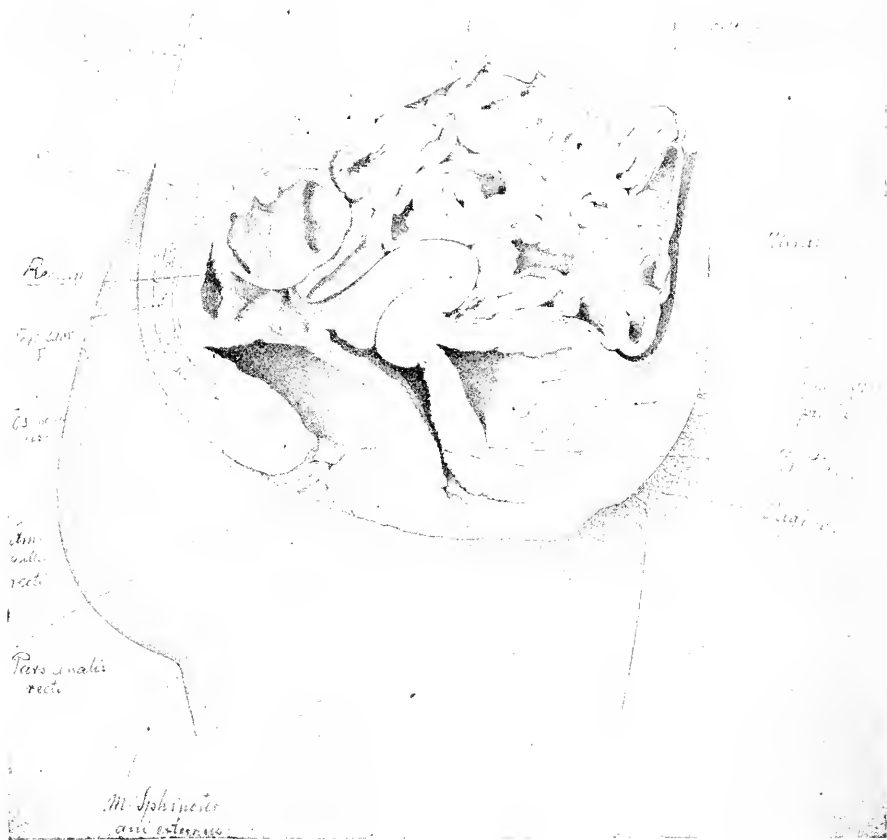


VAGINAL HYSTERECTOMY INSTRUMENTS.



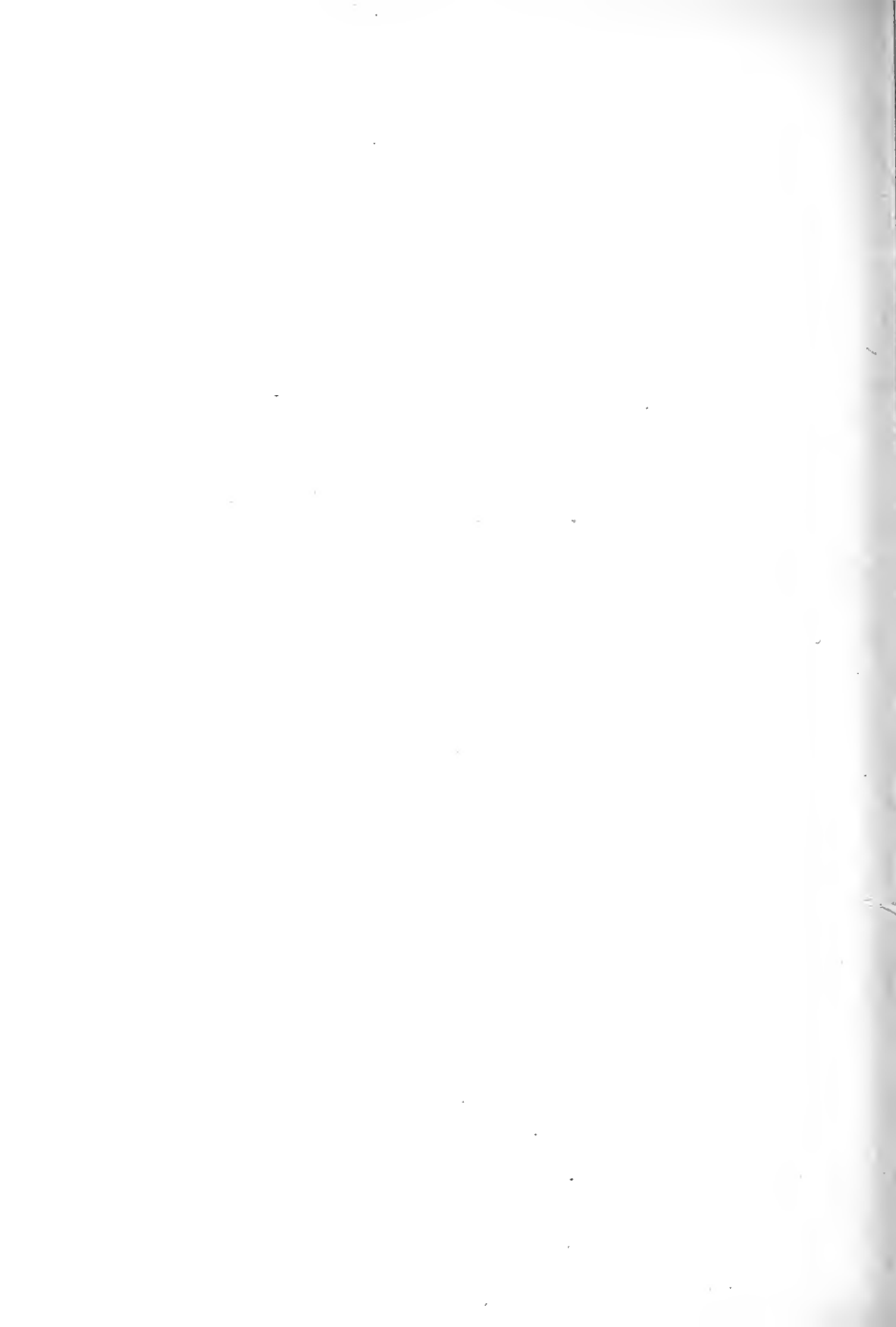


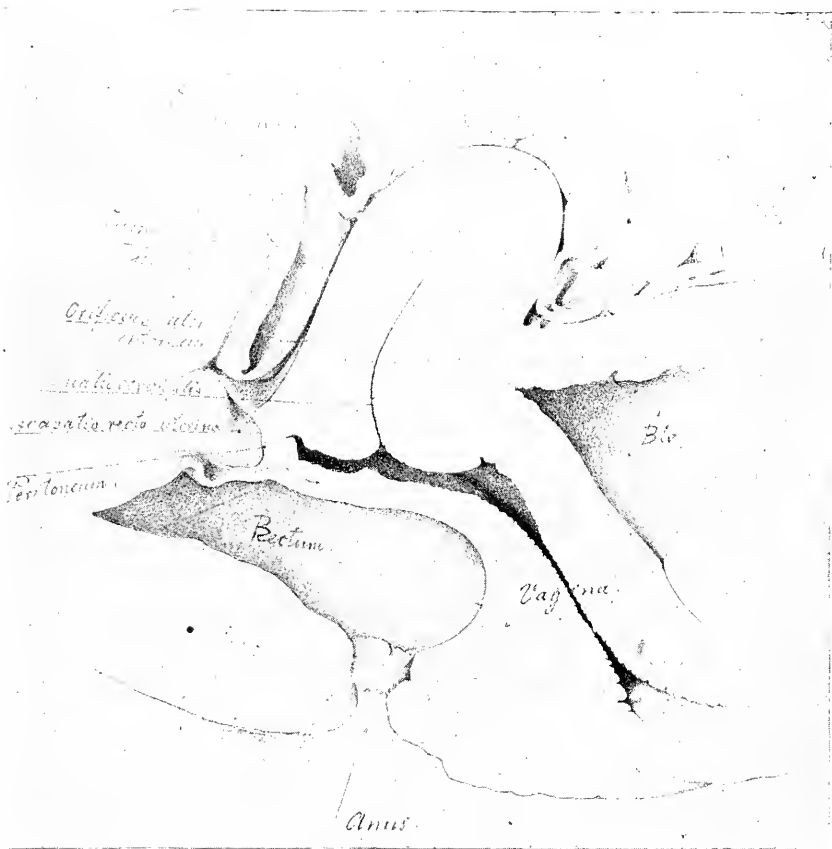
PACQUELIN CAUTERY.



Normal pelvic relations.

R. I. Sutton.

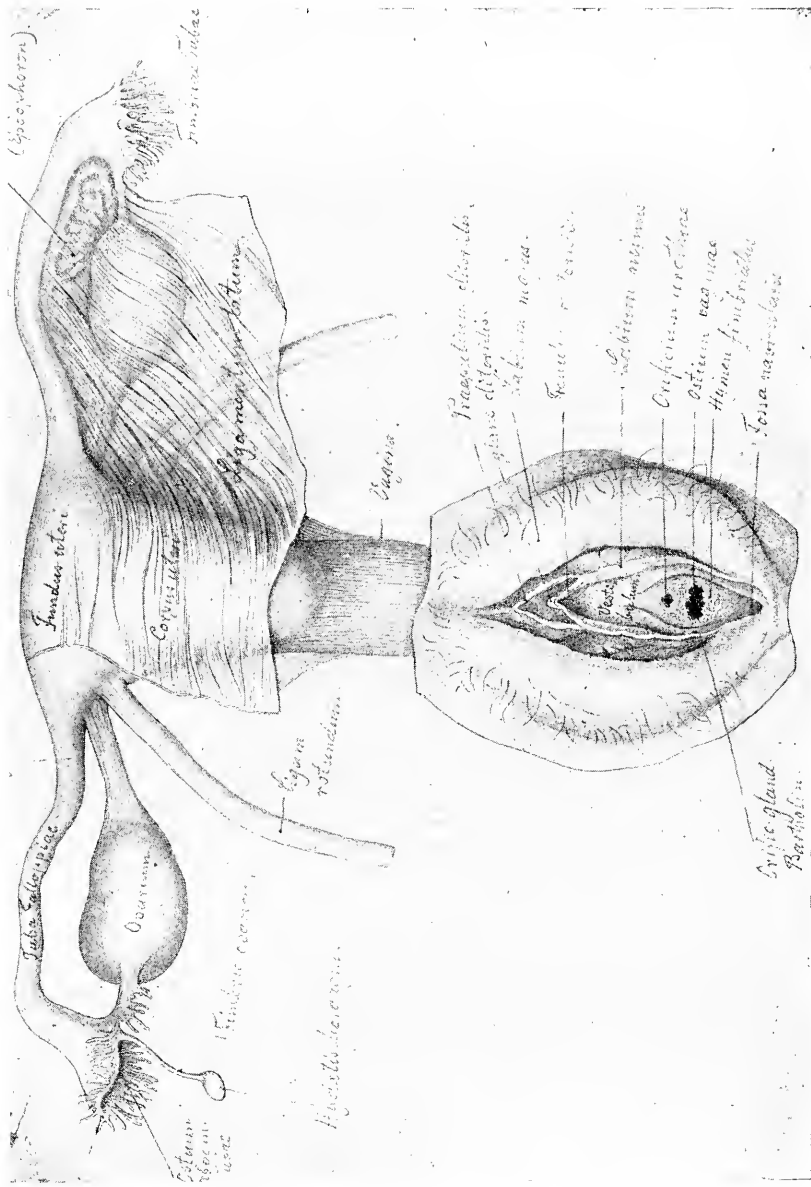


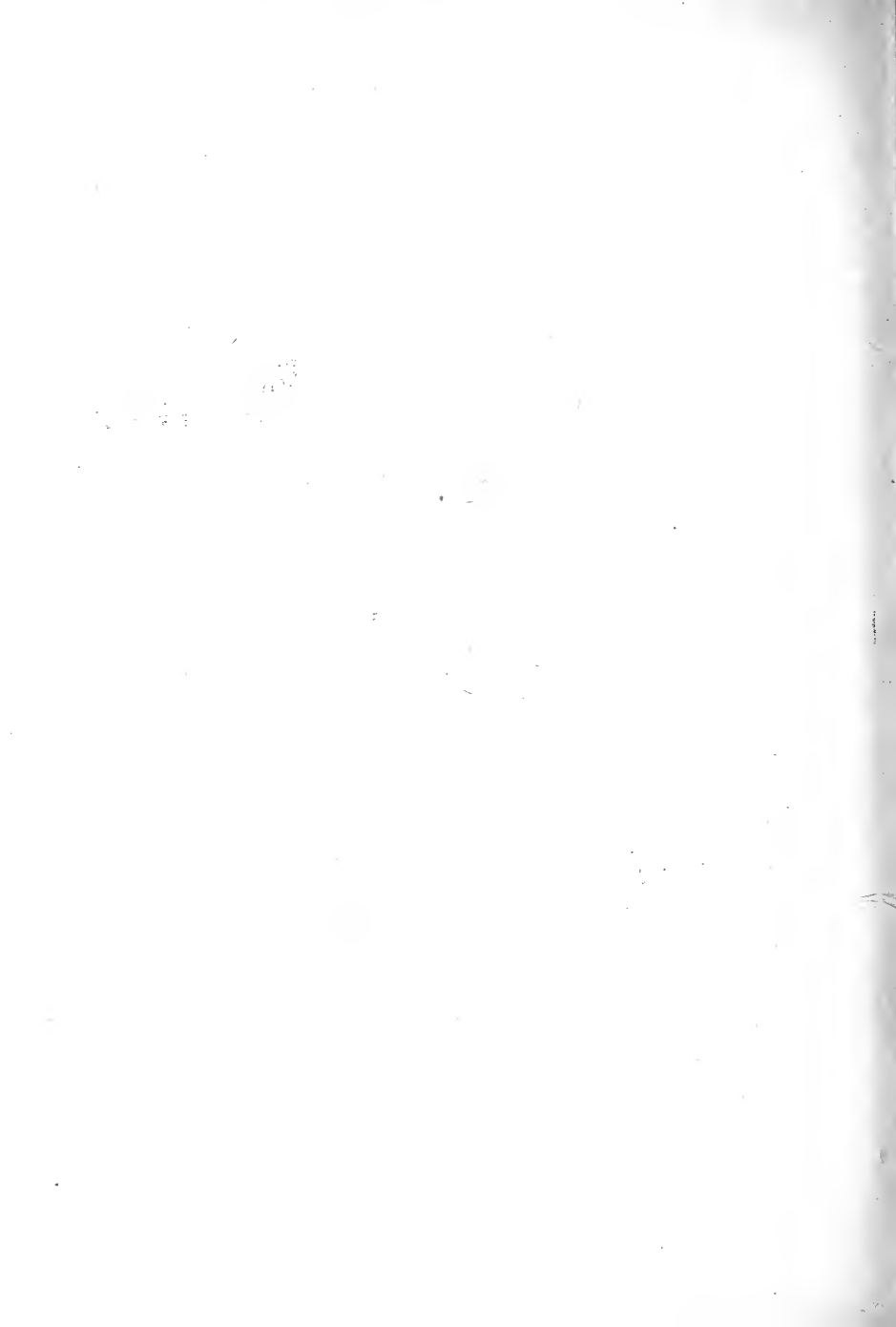


Normal position of the Uterus.

R. J. Sutton.









ERRATA.

- Page 36—Second line, "satuarated" should be "saturated."
39—First line, "dilitation" should be "dilatation."
44—Second line, "apparantly" should be "apparently."
54—Twelfth line, "protuding" should be "protruding."
58—Ninth line, "supperating" should be "suppurating."
60—Eleventh line, "abberation" should be "aberration."
62—Ninth line, "imbeded" should be "imbedded."
62—Twelfth line, "latter" should be "later."
62—Fifteenth line, "myemectomy" should be "myomectomy."
72—Seventeenth line, "latter" should be "later."
81—Twelfth line, "detatched" should be "detached."
89—Seventeenth line, "syntoms" should be "symptoms."
97—Fifteenth line, "occurring" should be "occurring."
99—Fifth line, "aperature" should be "aperture."
100—Foot of page, "slubaceous" should be "subserous."
100—Foot of page, "interstial" should be "interstitial."
114—Eleventh line, "interruped" should be "interrupted."
114—Second line, "adominal" should be "abdominal."
117—Thirteenth line, "risection" should be "dissection."
118—Fourth line, "involed" should be "involved."
123—Sixth line, "diseaae" should be "disease."
128—Thirteenth line, "procedentia" should be "proclidentia."
144—Last line, "saparated" should be "separated."
147—Sixteenth line, "euretteage" should be "curettagage."
163—Fifteenth line, "drawal" should be "withdrawal."
213—Fifth line, "Decemer" should be "December."
249—First line, "were" should be "was."
268—Fourth line from foot, after fifth word, insert "and."
287—Fourteenth line, "vessical" should be "vesical."
315—Sixteenth line, "euretteing" should be "curetting."
359—Tenth line, "women" should be "woman."

